

**An Almanac-
ke and Prognostication
for three yeares that is
to saye for the yeare of oure
Lord. 1571. and 1572. & 1573.
nowe newely added vnto my
late Rules of Nauiga-
tion, was printed
thij. yeres past.**

**¶ Practised at Grauesend for the Me-
ridian of London by William
Bourne student of the Ma-
thematicall science.**

(..)

**¶ Imprinted at London in
Pauls Churchyarde, at the
signe of the *Lucrèce*, by
Thomas Purfootc.**

(..)

January hath xxiiij. dayes.

i	a	Twelve dayes.	1
	b	C. Fayres.	2
ci	c	Octau. saint Stephen.	3
	d	Octa. Saint Iohn.	4
cii	e	Octaue Innocent.	5
viij	f	Twelve dayes.	6
	g	Felix and January.	7
ebi	a	Luciani Priest.	8
v	b	Lewes confessor.	9
	c	Paule the firste heremite.	10
ciii	d	Solin Aquario.	11
ij	e	Archadius marty.	12
	f	Hylary marty.	13
x	g	Felix priest.	14
	a	Maurice abbot.	15
xbiij	b	Marcelli marty.	16
vij	c	Saint Anthony marty.	17
	d	The deathe of Kinge Henry.	18
xv	e	Fabian and Sebastian.	19
iiij	f	Agnes virgin.	20
	g	Vincent abbot.	21
xij	a	Maurice abbot.	22
i	b	Emcrentianus.	23
	c	Terme beynneth.	24
ix	d	Conuerfa. of Saint. Paule.	25
	e	Septuages.	26
xvij	f	Faires at Bristowe.	27
vi	g	Iulian bishop.	28
	a	Policarpe bishop.	29
xliij	b	Agnes the seconde.	30
iiij	c	King. Edward began his reign.	31

February hath xxviij. dayes.

		his raigne.	Fast.	Faires.	
	d	But the first day of March,			1
ri	e				2
rii	f	at Bathe and Maidstone,			3
riiij	g	Gilbert,			4
		Agnes virgin.			5
rb	b	Medastus and Amandus,			6
b	c	Angule byshop,			7
	d	Paule byshop.			8
riiij	e	But the first day of March,			9
ij	f	Arelonie virgin,			10
	g	Scolastica virgin,			11
r		But the first day of March,			12
	b	Cufraste virgin.			13
rbiiij	c	Valentine, at Feversham,			14
bij	d	Shewenaday, at Lychesed,			15
	e	Raiston and Lamwozth,			16
rb	f	the next daye after,			17
riiij	g	Symon byshop,			18
		Sabin and Julian martyrs,			19
rtj	b	The first monday in Lent, at			20
i	c	Ciceter and Abington,			21
	d	Embzing dayes.			22
ix	e	Fast.			23
	f	Mathie Apoule. The			24
rbij	g	place of leape ycare,			25
vi		Henley vpon Thames.			26
	b	and Tenkesbury,			27
riiij	c	Oswalde byshop.			28

th	d	C March hath. xxi.	1
	e	Dauid byshop. Faites.	2
ci	f	Translati. of S. Mar.	3
	g	Saint Adzianc.	4
rie	a	Focas.	5
viij	b	Victor and Victorine.	6
	c	Perpetue and Felix,	7
vi	d	Deposi. of saint Felix,	8
b	e	Agapite virgin.	9
	f	Querrien and Candi	10
xiij	g	C Come in Aires.	11
y	a	The. 4. Sondag in Lent.	12
	b	at Stanforde	13
c	c	at Sudbery.	14
	d		15
viij	e	Equinoctium.	16
vi	f	Patrike byshop,	17
	g	Edward king.	18
xi	a	The. v. Sondag, at Grantam,	19
xiij	b	at Salisbury the mondaye.	20
	c	before our Lady daye,	21
xi	d	Entberth abbot,	22
i	e	Theodore priest, at Wilbich	23
	f	Palmsongaye euen.	24
ix	g	Annunciation of Mary.	25
	a	at Northampton,	26
viij	b	at Walden,	27
vi	c	Dorothe virgin,	28
	d	Victorine.	29
xiij	e	Quirine martyr	30
i	f	Adelmus byshop.	31

April hath xxx. dayes.

	a	¶ Pasch.	1
	b	¶ Easter.	2
rt	c	Richard byshop.	3
rie	d	Ambrose byshop,	4
big	e	at Wallingfozth,	5
ebi	f	Dirtus bishop,	6
o	g	at Darby	7
	a	Egesippi and Sociozum.	8
riij	b	at Bickelswozth and at	9
ij	c	Byllingwozth	10
	d	at Casam the monday after	11
e	e	Fabian marty?, (Solus Taur.	12
	f	Liburti, and Valeria.	13
rbij	g	Valerianus.	14
bij	a	Osualde byshop.	15
	b	Asdoze byshop.	16
rb	c	Aniceti byshop,	17
iiij	d	Cluthery byshop,	18
	e	¶ Easter beyneth	19
rij	f	Victor byshop.	20
i	g	The. iiij. sunday after Easter	21
	a	Faire at Louth	22
ix	b	George at chairing and	23
	c	Ipswich, amtill and	24
rbij	d	Viningam, Gilsford, martir	25
bi	e	¶ Easter. at Dntly.	26
	f	Anastasiu,	27
riij	g	Vitalis marty?,	28
iiij	a	Petrus martir,	29
	b	S. Erkenwode, ¶ Fast.	30
		A. iiij.	

	a	have bath. xxi. dayes	1
ri	b	Faires,	2
	c	at Stow the olde, at Rea	3
rix	d	ding, at Maidstone,	4
viii	e	at Leicester,	5
	f	and Chenceford.	6
vi	g		7
v	a	John Beuerley.	8
rii	c	at Beuerley.	9
ii	d		10
	e	Sol in Gemi.	11
	f	Wmitcham and saint	12
	g	Edes and at Bishop Hatford,	13
rbiii	a		14
vii	b	Boniface byshop,	15
	c	Wandine byshop.	16
	d		17
rb	e		18
iii	f	Dunstone byshop.	19
	g	Barnardine.	20
rii	a		21
i	b	Whitsonday.	22
	c	Cauntebury,	23
ix	d	Doilton and Stow the olde.	24
	e	Kingston upon Thames.	25
rbij	f		26
vj	g	Bed a priest,	27
	a		28
riiij	b	Kowell.	29
iiij	c		30
	d		31

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at Couentree S. Edes.

at bishop Stratfozth and

at Rolfe.

Transla. of Wolsan.

Transla. of Edward,

Que confessor

upon Barnabas day, at Dkingham.

Sol in Cancer.

Basill bishop,

S. Richarde.

at Shezelesbury, and at

S. Albon S. Jhons

Euens even,

at. of Jhon Bap. at

Cambridge, Gloucester,

Lincolne, Wilinsor Caun-

terbury, Colchester,

Peter Apostile & Paul at Wol-

lerhamton, at Peter

bozowe.

A. iiij.

ix	a	¶ Faires,	1
viij	a	Translation of mary.	2
	b		3
v	c	Transla. of saint marke,	4
iiii	d		5
	e	Thon Benerley.	6
iii	f	Doige dayes beginneth.	7
ii	g	Grimbald,	8
	a	Cyrellus byshoppe.	9
	b		10
	c	at Partney cathedralesaire.	11
v	d	Raboz and Felix.	12
vi	e		13
	f	¶ Sol in Leo.	14
v	g	Transl. of s. Swithin.	15
iiii	a	at Binchebacke	16
	b	saint Belemis daye at	17
iii	c	Winchcome.	18
ii	d		19
	e	saint Margaret at W.	20
v	f	bridge and Catesby,	21
	g	Mary Mag. at Marlebo-	22
vi	a	row Winchester, Colchel-	23
vii	b	ter, Tethe and thetford	24
	c	aines apostle at	25
iiii	d	Bzistow, Ipswicke	26
iii	e	Northampton Darby	27
	f	saint James beside	28
ii	g	London, Reading,	29
	a	Louth and Paulsbery,	30
ix	b		31

viij	c	Lanmas day.	1
xvi	d	Feuersam, Dunstable. S. Coes,	2
b	e	Budsozth, marram	3
	f	Church, Wilsbich.	4
xiiij	g	Clay the Prophete,	5
ij	a	Transfiguratio domini.	6
	b	Feast of Iesu.	7
x	c		8
	d	Romayne marty?	9
xviij	e	S. Laurence daye at Bedsozth	10
vij	f	Fornam, Stodes, blake	11
	g	amoye, saint Laurence.	12
xv	a	at Waltham:	13
iiij	b	Colin Vinco.	14
	c	Transfiguration of Iesu.	15
xij	d	Kochus.	16
i	e		17
	f	Agapite marty?	18
xix	g		19
	a	Letwes byshop.	20
xviij	b	Saint Barnard.	21
vi	c		22
	d	Fast.	23
xiiij	e	at London, Tewkesbury,	24
iiij	f		25
	g	at Pantwicke	26
xj	a	Porthalerton	27
	b	Sudbery,	28
xix	c	Decola. of saint Ihon.	29
vij	d		30
	e	Cutbert virgin.	31

vi	f	¶ Fayres.	1
vi	g	Anthony martyr,	2
		Boothus.	3
xiij	b	Tranſ. Cuthbert,	4
ij	c	Egedij confelloz,	5
	d	Whogge dayes ende.	6
	e	ſtatute of mact, at	7
	f	Cambridge Sturbidge,	8
xviij	g	at London in Southwarke,	9
vij		at Partney thre Lady	10
	b	dayes fayre,	11
xv	c	Martine Biſhop,	12
xiij	d	Sol in Libro. Amantis martir.	13
	e	Holy Rodde daye, at	14
xij	f	Waltam abbey, and at	15
i	g	Wotten vnder hedge,	16
		and at Spaiding,	17
x	b	Wrbidge and Cafesby	18
	c	S. Laurence.	19
xv	d	¶ Timber daye.	20
vi	e	ſtatute apoſt at Croyden,	21
	f	Holden in Holdernes.	22
xiij	g	Saint Edmondes bury,	23
ij		Firmin byſhop,	24
	b	Cypriane and Juſtiniane,	25
x	c	Cosme Damiane.	26
	d	Cruerty byſhop,	27
xix	e	ſtatute of Beaun. at nuntton	28
xviij	f	S. Iues, Hadley, Latham,	29
	g	Spilnall, and Sittingbozne,	30

		THE MONTH OF APRIL. FIRST DAYES.	
vi	b	Leodegarius martir.	2
v	c	Candidi martir.	3
iiii	d	Frauncis Confessor.	4
iii	e	Appolin martir.	5
ii	f	Sainct Faithes daye	6
	g	Saint Sithes besyde	7
		Roꝝwiche.	8
vi	b	Merzell & Mercelliani,	9
v	c	¶ The daye of the	10
iiii	d	Picase byshop.	11
iii	e	The birth of king Edward	12
ii	f	Saint Edwardes daye at	13
	g	Grauesen, at Winesol in Scor.	14
		for and Warfield.	15
vi	b	S. Wulfrane byshop.	16
v	c	Etheldrede virgin.	17
iiii	d	The Evangelist, at	18
iii	e	Ely and Stainton.	19
ii	f		20
	g	Æ. Thousand virgins.	21
		Mary Salome.	22
vi	b		23
v	c	Agloꝝ byshop.	24
iiii	d	Crispin and Crispiniani.	25
iii	e		26
ii	f	¶ Fast.	27
	g	¶ Simon and Jude at	28
		Warford, Ciceter and	29
vi	b	Newmarket.	30
v	c	Quintine ¶ Fast.	31

November hath the dayes.

	d	All saints day.	¶ Faires.	1
rits	e	All soules day at		2
is	f	Kingston and Blechingly,		3
	g			4
	a			5
	b	Saint Leonardus day,		6
rbis	c	at Newepostponde,		7
bis	d	and at Standley,		8
	e	Theodoretus.		9
rb	f	Martine byshop,		10
ing	g	Amantis martyr		11
	a			12
is	b	Edmonde kinge at Colindale		13
d	c	Saint Edmondes bury.		14
	d			15
ir	e	Edmond archbishop		16
	f	Wewe byshop,		17
rbis	g	at Lincolne,		18
bi	a	Chyloth byshop		19
	b			20
ring	c			21
iii	d			22
	e	Clement byshop.		23
ri	f			24
	g	Katherine virgin.		25
ric	a			26
bis	b			27
	c	Thomas enteth	¶ Faires.	28
rbis	d	Rochester & Maidenhead.		29
b	e	Andrew apostle at		30

	f	C December hath cccij. dayes.	1
	g	¶ Faires	2
viij	a	Aduent Sundaye,	3
ij	b	Barbara virgin.	4
x	c	Saba abbot,	5
xv	d	saint Nicolas Bishop.	6
vi	e	at Spalbinge,	7
xvi	f	Conception of mary.	8
vii	g	Cyprian abbot.	9
xvii	a	Eulalie virgin.	10
viii	b	Damascus,	11
xviii	c	Saint Lucie virgi. C Sol in Cap.	12
ix	d	Picatus byshop.	13
xix	e	Valerian byshop.	14
x	f	Lazary byshop,	15
xx	g		16
xi	a		17
xxi	b	Gracian byshop.	18
xii	c	Ignatius byshop.	19
xxii	d	Emburg da vs:	20
xiii	e	Thomas apostle.	21
xxiii	f	III. martirs,	22
xiiii	g	Victo; Virgin.	23
xxiiii	a	¶ Fast.	24
xv	b	Bartholome of Choriz.	25
xxv	c	Stephen martir.	26
xvi	d	John the baptist.	27
xxvi	e	Amodeus martir.	28
xvii	f	Thomas Becket, at	29
xxvii	g	Caunterbury	30
xviii	a	Spluester Byshop.	31

**The Declaracion of this
Allmanacke for the
yeare of our Lord.**

1571.

The Bold n number.

The Circle of the Sunne.

The Epacke.

The Dominicall letter.

**Between Christmas & Shroftide vij. weekes
and vi. dayes.**

Ashe wendsdaye the xxviii. daye of February.

Esterdaye the xv. daye of Aprill.

Ascension sondaye the xx. daye of Maye.

Whyt Sondaye the iij. daye of June.

**This yere 1571. is no Eclypes of the Sou-
ne nor of the mone.**

January hath xxxi. dayes.

**The firste quarter the. 3. daye at 3. of the
clocke 5. minutes in the morninge coulde.**

**The full Moone the 11. day at 7. of the clocke
18. minutes in the Morninge temperat could.**

**The laste quarter the 19. daye at one of the
clocke in the Morninge raine and coulde.**

**The newe Moone the 25. daye at 2. of the
clocke 56. minutes in y after none could wind.**

February hath xxviii. dayes.

**The first quarter the firste daye at 12. of the
clocke 4. minutes at midnichte could the winde
North.**

The

The full Mone the 9. daye at 12. of the clocke
42 minutes at midnight great and most venient
winde.

The last quarter the 17. day at 10. of the clocke
in the morninge temperat.

The newe Mone the 24. daye at 2. of the clocke
28. minutes in the morninge moyst.

¶ March hath xxxi. dayes.

The first quarter the 3. daye at 4. of the clocke
in the after none moyst.

The full Mone the 11. daye at 3. of the clocke
48. minutes in the after none temperat.

The last quarter the 18. day at 4. of the clocke
48. minutes in the after none could.

The newe Mone the 25. day at 4. of the clocke
46. minutes in the after none very hott & drye
for that season of the yere.

¶ Aprill hath xxx. dayes.

The first quarter the 2. day at one of the clocke
at none moyst.

The full Mone the 10. day at one of the clocke
42. minutes in the morning darcke cloudy we-
ther for to folow.

The last quarter the 16. day at 9. of the clocke
50. minutes in the after none tempestuous wether.

The newe Mone the 24. daye at 6. of of the
13. minutes in the morninge temperat.

¶ Maye hath xxxi. dayes.

The first quarter the 2. daye at 6. of the clocke
in the morninge temperat and windy.

The full Mone the 9. daye at 11. of the clocke
56. minutes at none moyst. The

The last quarter the 16. day at 3. of the clocke
50. minutes in the morninge temperat.

The new Moone the 23. daye at 6. of the clocke
24. minutes in the after none windy

The first quarter the last daye at 9. of y^e clocke
40. minutes at nighte temperat but after 2. or 3.
dayes great windes.

C June hath xxx. dayes.

The full Moone the 7. daye at 8. of the clocke.
40. minutes at nighte temperat.

The laste quarter the 14. daye at 12. of the
clocke at none warme.

The newe Moone the 22. daye at 9. of the
clocke 17. minutes in the morninge moyste.

The firste quarter the laste daye at 10. of the
clocke in the morninge winde and tempestes.

July hath xxxi. dayes.

The full Moone the 7. daye at 3. of the clocke
11. minutes in the morninge windy.

The last quarter the 13. day at 11. of y^e clocke
20. minutes at nighte temperat.

The newe Moone the 21. daye at 12. of the
clocke. 33. minutes at midnighte thonder and
lightninge.

The firste quarter the 29. daye at 9. of the
clocke at nighte moyste.

August hath xxx. dayes.

The full Moone the 5. daye at 11. of the clocke
14. minutes in the morninge, raine and tempe-
stes.

The last quarter the 12. daye at one a clocke
at none raine and tempestes. The

The newe Moone the 20. day at 3. of the clocke
53. minutes in the after none temperat.

The first quarter the 28. day at 3. of the clocke
in the morninge, warme.

¶ September hath xxxi. dayes.

The full Moone. the 3. daye at 4. of the clocke
52. minutes at nighte greate and moſte terrible
windes.

The laſt quarter the 11. day at 6. of the clocke
2. minutes in the morninge cloudye wether and
windye.

The newe Moone the 19. daye at 6. of the
clocke 54. minutes in the morninge temperat &
coude.

The first quarter the 26. day at 10. of the clock
48. minutes in the morninge temperat.

¶ October hath xxxi. dayes.

The full Moone the 3. daye at 6. of the clocke
24. minutes in the morninge temperat.

The laſt quarter the 10. daye at 12. of the clocke
at midnichte moyſte.

The newe Moone the 18. daye at 8. of the
clocke 41. minutes at nighte, lyke to be foule
wether.

The firſte quarter the 25. day at 6. of the clocke
30. minutes at nighte lyke to be no good we-
ther.

¶ Nouember hath xxx. dayes.

The full Moone the firſte daye at 8. of the clocke
20. minutes at nighte temperat.

The laſt quarter the 9. daye at 9. of the clocke

at night raine.

The newe moone the 17. daye at 9. of the clocke 14. minutes in the morninge coulde & moist.

The firste quarter the 24. daye at 2. of the clocke 3. minutes in the morninge moist.

¶ December. 1571.

The full Moone the firste daye at 12. of the clocke 40. minutes at hye none coulde miste weather.

The last quarter the 9. daye at 3. of the clocke 40. minutes at after none coulde.

The newe Moone the. 16. daye at eichte of the clocke. 17. minutes at nighte raine, winde and fleete.

The firste quarter the. 23. daye at. 11. of the clocke in the morninge, moiste.

The full Moone the laste daye at seuen of the clocke sixe minutes in the morninge moiste lyke to snowe.

The

The Declaracion of the Almanacke for the yeare of our Lorde God. 1572. beinge Lepe yeare.

T he Golden number.	15.
The Circle of the Sunne.	13.
The Epacte.	15.

The Sondaye letter. f. and e.

Betwene Christmas and Shrofsyde 7. weekes and 5. dayes.

Ashewenedaye the 20. daye of Februarye.

Ester daye the 6. daye of Aprill.

Rogacion Sondaye the xi. daye of Maye.

Whytsondaye the 25. of Maye.

¶ This yeare of our Lorde 1572. there shalbe an Eclipse of the moone the 25. daye of June at 11. of the clocke 18. minutes in the eneninge and shalbe darkened 7. pointes 12 minutes in the signe of Capricorne 13. degrees and 30. minutes within 9. degrees and 46. minutes of the Dragons tayle, and shall beginne for to come vnderneath the shadow of the earth with vs at London at 8. of the clocke 53. minutes, and shalbe at the greatest darkenes at 10. of the clocke 18. minutes & shal end here Eclipse at 11. of the clocke 43. minutes so that it shall continue fro the beginning vnto the ende 2. oures 50. minutes and the principall of the Eclipse shallbe sens in the Southe Southe Est.

¶ Januarye 1572.

The last quarter the 8. daye at 11. of the clocke in the forenone temperat coulde.

The newe Moone the 15. daye at 6. of the clocke 38. minutes in the after none inclyned to bee winde and moiste.

The firste quarter the. 21. daye at 12. of the clocke at midnichte coulde lyke to be snowe.

The full Moone the 30. daye at one of the clocke 58. minutes in the morninge froste.

¶ Februarye 29. dayes.

The laste quarter the 7. daye at 2. of the clocke in the morninge coulde rayne and cloudy.

The newe Moone the 23. daye at 4. of the clocke 38. minutes in the after none moyst.

The first quarter the 20. daye at 4. of the clocke 5. minutes in the after none temperat.

The full Moone the 28. daye at 6. of the clocke. 40. minutes in the after none darcke raine wether.

¶ Marche 1572.

The last quarter the 7. daye at hye none 50. minutes temperat.

The newe Moone the 14. daye at 7. of a clocke 26. minutes in the morninge temperat, but after 3. dayes great windes.

The firste quarter the 21. daye at 9. of the clocke 50. minutes in the forenone warme.

The full Moone the 29. daye at 12. of the clocke 13. minutes at hye none coulde and raine.

The

¶ April 1572.

The laste quarter the 5. daye at 7. of the clocke
52. minutes in the eueninge hotte with thonder
and lighteninges.

The newe Moone the 12. daye at 12. of the
clocke 43. minutes at hyghe none winde but af-
ter that saye and temperate.

The firste quarter the 20. daye at 4. of the clocke
in the morninge temperat warme.

The full Moone the 28. day at one of the clocke
28. minutes in the morning thonder and tem-
pestes.

¶ Maye 1572.

The laste quarter the 5. daye at one of the clocke
in the morninge temperat and windy:

The newe Moone the 11. daye at 11. of the
clocke 43. minutes at hyghe midnichte tempe-
rat.

The first quarter the 19. daye at 7. of the clocke
49. minutes in the after none temperat.

The full Moone the 27. daye at 11. of the
clocke 56. minutes at hyghe none saye wether.

¶ Iune 1572.

The last quarter the 3. daye at 5. of the clocke
in the morninge temperat.

The newe Moone the 10. daye at 11. of the
clocke 56. minutes at hyghe none temperat.

The firste quarter the 18. daye at one of the
clocke 40. minutes at none temperat.

The full Moone the 25. daye at 10. of the clocke
18. minutes at nighte temperat.

B. iij.

¶ Iu-

9 July 1572.

The laste quarter the seconde daye at. 10. of the clocke 40. minutes before none raine & thunder.

The newe Moone the 20. daye at one of the clocke. 40. minutes in the morninge, raine & tempestes.

The firste quarter the 18. daye at 6. of the clocke in the forenoonne boate wether lyke to thunder and lighteninge,

The full Moone the 25. daye at 4. of the clocke 30. minutes in the morning close wether and alteration of wether.

The last quarter the laste daye at 8. of the clocke at night temperat.

¶ August. 1572.

The newe Moone the eighte daye at. 5. of the clocke in the after none raine haile thunder and tempestes.

The firste quarter the 15. daye at 7. of the clocke at night winds and alteration of wether.

The full Moone the 23. daye at. 12. of the clocke at night raine and tempestes.

The laste quarter the. 30. daye at sixe of the clocke 40. minutes in the morninge temperat.

¶ September 1572.

The newe Moone the seuenthe daye at 9. of the clocke 15. minutes in the forenone temperat.

The firste quarter the. 15. daye at 5. of the clocke

clocke in the morning temperat, & moyst wether.

The full Moone the 21. daye at eighte of the clocke. 34. minutes at night, warme.

The laste quarter the. 28. daye at. 11. of the clocke at night temperat and moiste.

¶ October. 1572.

The newe moone the seuenthe daye at 2. of the clocke 47. minutes in the morninge greate windes.

The firste quarter the 14. daye at 2. of the clocke at night raine.

The full Moone the 21. day at sixe of the clocke 30. minutes in the morninge raine.

The last quarter the 28. daye at 5. of the clocke 47. minutes at night, temperat according vnto the tyme of the yeare.

¶ Nouember. 1572.

The newe moone the 5. daye at 6. of the clocke 35. minutes at night raine.

The first quarter the 12. day at 9. of the clocke 5. minutes at night temperat and after alteration of wether.

The full mone the 19. daye at 6. of the clocke 29. minutes at night, raine.

The laste quarter the 27. daye at one of the clocke 45. minutes at none temperat.

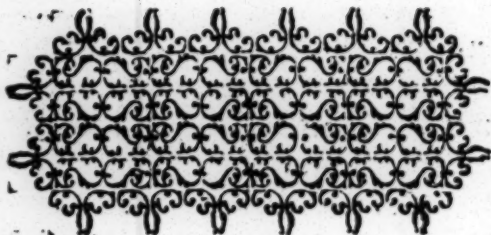
¶ December. 1572.

The newe mone the 5. daye at 8. of the clocke 53. minutes in the morninge temperat.

The first quarter the 12. daye at 5. of the clocke in the morninge frost.

The full Moone the 19. daye at 9. of the clocke 24. minutes in the forenone coulde lyke to snowe.

The laste quarter the 27. daye at 11. of the clocke 10. minutes before none temperat, but after wardes winde and alltration of wether.



The

The Declaration of the Almanacke for the yeare of oure Lorde. 1573.

T he golden number.	16.
The Cirkell of the sonne.	14.
The Epacte.	26.
The Sondayes letter.	D.

Betweene Christmas and Shroftwyde 5. weekes and
5. dayes.

Ashe wenesdaye the 4. daye of February.

Ester daye the 22. of Marche.

Trinagion sondaye the 26. daye of Aprill.

Ascension daye the 30. daye of Aprill.

Whitsondaye the 10. daye of Maye.

This yeare of oure Lorde. 1573. there shal-
be an Eclipse of the mone the 8. daye of Decem-
ber at eighthe of the clocke. 42. minutes at ni-
ght & shalbe darckened 19. pointes. 38. minutes
y^e mone being in y^e signe of Gemini. 26. degrees 34
minutes with in one degree and 31. minutes of
the Dragons hed and the mone shall beginne for
to come vnderneath the shadowe of the earthe
with vs at London at 7. of the clocke 36. minu-
tes and shalbe at the greatest darknes at 8. of the
clocke 42. minutes and shall ende byre Eclipses
at 9. of the clocke 46. minutes. So that it shall
continewe from the beginninge vnto the eande.
2. ours 8. minutes and the principall of the darck-
nes of the Mone shalbe sene nere the southe est.

B. v.

C Ianua-

C January. 1573.

The newe moone the 3. daye at 9. of the clocke 56. minutes at night could froste and 3. dayes after could stormes.

The firste quarter the 10. daye at one of the clocke at none temperate for that tyme of the yeare.

The full moone the 18. daye at 2. of the clocke 14. minutes in the morninge rayne.

The laste quarter the. 26. daye at. 6. of the clocke in the morninge temperat and moiste accordinge vnto the tyme.

Februarye. 1573.

The newe Moone the seconde daye at eight of the clocke 41. minutes in the morninge temperat.

The firste quarter the 9. daye at one of the clocke in the morninge windy.

The full moone the 16. daye at 7. of the clocke 44. minutes at night reasonable wether.

The laste quarter the. 24. daye at. 11. of the clocke 20. minutes at night temperat.

Marche 1573.

The newe Moone the thyrde daye, at sixe of the clocke 24. minutes at after none moyste wether.

The firste quarter the 10. daye at 11. of the clocke 50. minutes at hye none rayne and tempestes.

The full moone the 18. day at . of the clocke 6. minutes at none temperat warine.

The

The last quarter the 26. daye at 8. of the clocke 40. minutes at none raine.

¶ Aprill 1573.

The newe Moone the seconde daye at. 3. of the clocke 13. minutes in the morninge, warme wether.

The firste quarter the 9. daye at 2. of the clocke in the morninge temperat.

The full Moone the 17. daye at 6. of the clocke 44. minutes in the morninge temperat.

The laste quarter the 25. daye at one of the clocke in the morninge muche winde.

¶ Maye 1573.

The newe Moone the firste daye at. 11. of the clocke 49. minutes at none temperat and fayre.

The firste quarter the 8. daye at 9. of the clocke in the after none temperat.

The full Moone the, 16. daye at nyne of the clocke 11. minutes at nighte fayre and drye wether.

The laste quarter the. 24. daye at thre of the clocke 40. minutes in the morning temperat and moiste.

The newe Moone the 30. daye at 9. of the clocke at nighte tempestuous wether.

¶ Iune 1573.

The firste quarter the seuenthe, daye at none stormye wether longe together.

The full Moone the 15. daye at 9. of the clocke 6. minutes in the morning tempestes wether.

The

The laste quarter the 22. daye at 7. of the
clocke 34. minutes in the morninge rayne and
tempestes.

The newe Moone the 29. daye at 7. of the
clocke. 4. minutes in the morninge moiste we-
ther.

¶ July 1573.

The firste quarter the. 7. daye at. 5. of the
clocke 34. minutes in the morninge temperat and
moiste.

The full Moone the 14. daye at 7. of the clocke
22. minutes at after none windyc.

The laste quarter the 21. daye at one of the
clocke 5. minutes at none fayre and warme.

The newe Moone the 28. daye at 6. of the
clocke. 54. minutes at after none fayre and
warme.

¶ August 1573.

The firste quarter the 5. daye at 10. of the
clocke at nighte darcke cloudy wether.

The full Moone the 13. daye at. 4. of the clocke
31. minutes in the morninge temperat.

The laste quarter the 19. daye at eighte of the
clocke 31. at nighte tempestes wether.

The newe Moone the 27. daye at. 9. of the
clocke 54. minutes in the morning temperat and
windyc.

¶ September. 1573.

The firste quarter the 4. daye at one of the
clocke. 40. minutes at none raine and greate
tempeste.

The

The full Moone the 11. daye at one of the
clocke 11 minutes at none temperat and moyst.

The laste quarter the 18. daye at 4. of the clocke
in the morninge moiste.

The newe Moone the 26. daye at two of the
clocke 36. minutes in the morninge temperat.

¶ October. 1573.

The firste quarter the 4. daye at 4. of the clocke
30. minutes in the morninge windy.

The full Moone the 10. daye at 10. of the
clocke 4. minutes at nighte temperat.

The laste quarter the 17. daye at 6. of the clocke
at nighte ranye wether

The newe Moone the 25. daye at 8. of the
clocke 40. minutes at nighte raine.

¶ Nouember. 1573.

The firste quarter the 2. daye at 5. of the clocke
at nighte coulde and moiste.

The full Moone the 9. daye at 7. of the clocke
42. minutes in the morninge tempeste wether.

The laste quarter the 16. daye at 9. of the clocke
50. minutes in the morninge stormye wether
a longe time together.

The newe Moone the 24. daye at 2. of the
clocke 35. minutes in the after none temperat for
the time of the yeare.

¶ December. 1573.

The firste quarter the seconde daye at thre
of the clocke twentye minutes in the morninge
moiste.

The full Moone the 8. daye at eghte of the
clocke

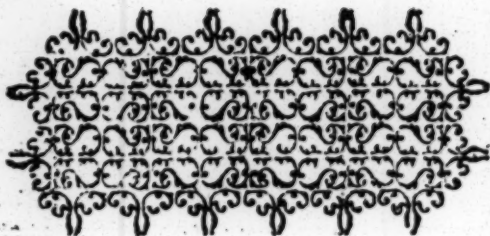
clocke 42 minutes at nighte myllinge wether.

The laste quarter the 16. daye at 7. of the clocke in the morninge temperat coulde.

The newe Moone the. 24. daye at. 7. of the clocke 22. minutes in the morninge windye.

The firste quarter the laste daye at 10. of the clocke 40. minutes before none some what temperat wether.

FINIS.



A

¶ A rule for letting of bloude,
Purginge, Bathinge,
Settinge, Sowinge
and Plantinge.
(.2.)

First, lette no bloude at anye tyme withoute
greate cause, for it bringethe weakenes and
manye infirmities: If you doe yet see that it
be after good digestion, & fastinge in a sayre
temperat dape, and beware of all manner of ex-
cesse, as labouringe watchinge, and carnall copu-
lation, and so forth: And after that vse syne mea-
tes of lighte digestion, and abstayne from all the
aforesayde vnto the fourthe dape. And these sig-
nes be mooste vnnete for lettinge of bloud, & Mo-
ne beinge in Taurus, Gemini, Leo, Virgo, and
Capricornus, the last halfe of Libra, and the firste
halfe of Scorpio, the reste all good, so that the
Moone be not in the signe that gouerneth the me-
ber. Furthermore, let the Flegmatike bloude in
the signe of Aries, and Sagittarius, the Melan-
cholike persones, in Libra and Aquarius: And
for the Cholericke persones, Cancer, Scorpio,
and Pisces, and the Sanguine people, Aries,
Cancer, Libra, Scorpio, Sagittarius, Aquarius
& Pisces: Furthermore, from the new Moone to
the firste quarter, a mete tyme for to lette yong
men bloud: And from the firste quarter to the
full

full moone, good for middle age. And from the full to the last quarter, mete for aged folkes. And from the last quarter to the chaunge, beste for old men.

Furthermore, there is to be noted this, that you lett no bloude when that Mars and Saturne haue anye aspect the one to the other, neither the moone to Saturne or Mars, neither anye aspect of the Moone to y^e Sonne, nor the Moone to y^e tayle of the Dragon, and in the spring time lett bloud at the right side, in haruest time at the left side.

¶ Of purginge.

THE best time to take purgations, is neither when the time is to hoate nor to colde: For by the rules Astronomicall, the best time is when the Moone is in coulde and moist signes, as in Cancer Scorpio, Bilces, and Gemini, beinge comforted by anye aspecte of the good planetes: And the Moone in Aries, Taurus, Leo, Virgo, & Capricornus, be natlyghte to purge, and the cause of the vomitinge of the purgation is, if the moone haue aspect to anye planete retrograde.

¶ To Bathe.

THE moone in Aries, Leo, Sagittarius, Cancer, Scorpio, and Bilces, bee very good to bathe and these folowinge be euill to bathe, as Taurus, Virgo, and Capricornus.

Good to stoppe fluxes, Rewmes, and Laxes the moone in Taurus, Virgo, and Capricornus.

Good to cōfort the vertue attractiue, the moone in A-

in Aries, Leo and Sagittarius.

The powers retentive, the moone in Taurus, Virgo, and Capricornus.

For the digestive, the moone in Gemini, Libra and Aquarius.

For the expulsive vertue, the moone in Gemini, Cancer, Scorpio, and Pisces.

**¶ For setting, sowynge, and
Planting.**

Good to sowe seades, the moone in Taurus, Cancer, Virgo, Libra, and Capricornus, in the increase of the moone, and to plante and graft, the moone in Taurus and Aquarius, in the increase of the moone, being fixed signes, and being muche the better for planting, sowing, and grafting, the moone hauinge sextile or trine aspect with Saturne, it is good to doe any thing about digginge or earing of the ground.

**¶ How to foloweth the nature of the. xii.
signes with their properties.**

Aries is boate and drye, of the nature of the fier, Collick, masculine, of the daye orientall of the house of Mars, & the exaltation of the sunne, and a mouable signe, and of a bitter sauour, and of the humaine member, hepeth the head and the face.

Taurus is colde and drye, of the nature of the earth, melancholike, femenine, of the night meridional.

tionall, a fired signe, the house of Venus, the exaltation of the Moone, and of a sweete sauour, and keepeth of man the necke and gozge.

Gemini is hoate and moist, of the nature of the ayre, sanguine, masculine of the daye occidentall, and commonly the house of Mercurie, of a sweete sauour, and keepeth of man the shouldeers, armes and bandes.

Cancer is colde and moist, of the nature of water, flegmaticke feminine, of the night septentrionalles, a mouable signe, the house of Luna, the exaltation of Jupiter, of a salte sauour, and keepeth of man the brest, stomake, and long.

Leo is hoate and drie, of the nature of fyre, colericke, masculine, of the daye Orientall, and fired the house of the Sunne, of a bitter sauour, and keepeth of man the harte, backe and sides.

Virgo is colde and drie, the nature of the earth, melancholike, feminine, of the night meridionalles, and common the house of Mercurie, and of a sweete sauour, and keepeth of man the belly, bowelles, and inward partes.

Libra is hoate and moist, the nature of the ayre, sanguine, and masculine, of the daye Occidental, and mouable, the house of Venus, the exaltation of Saturne, of a sweate sauoure, and keepeth of man the navel, and the lower partes of the belly with the loynes.

Scorpio is cold and moist, of the nature of the water, flegmaticke, feminine, of the night Septentrionalles, & fired the house of Mars, of a salte sauour, & keepeth of man the ppeuy parts & the bladder.

Sagitt

Sagittarius is hoate and drie, of the nature of
fyrre, colerike and masculine, of the date **Orientalis**
and common the house of **Jupiter**, of a bitter sa-
uour, and kepeth of man the thighes.

Capricornus is colde and drie, of the nature of
the earth, melancholike feminine, of the night me-
ridionals, and mouable, the house of **Saturne**, the
exaltation of **Mars**, and a sower saour, and kepeth
of man the knees.

Aquarius is hoate and molste, of the nature of
the ayre, sanguyne masculine, of the date **Occiden-
tals**, and fired the house of **Saturne**, and of a
sweete saour, and kepeth of man the shinnes and
legges,

Pisces is colde and moist, of the nature of the
water, flegmatike feminine, of the night **Septen-
trionals**, and common the house of **Jupiter**, and
the exaltation of **Venus**, of a salte saour, and ke-
peth of man the feete.

**The nature, course and qualittie of the. vii.
lightes of Planetes.**

Saturne is hieft of the. vii. Planetes, and slowest
of his proper motion, being colde and drie of na-
ture, malicious, and enemy to nature, a destroyer
of life, and of the body he gouerneth the right ear:
the milt, the bladder, and of humors the melan-
cholike, and part of fleume, his colour is like vnto
lead colour, requirring neare. 30. yeares to fulfill
his course, his metall is lead.

Jupiter is next to **Saturne**, temperat, faire, and

bright, being hoate and moyste, sanguine, louing,
hauing regarde ouer the lunges, the sides, the gri-
ffels, and of the seade oz naturall humoꝝ of man,
his mettall is tinne, requiring. xii. yeares to finish
his course.

Mars is hoate and drie, of nature cruell, and of
the body is attributed to him the lste eare, the
baynes, the genitoꝝies, and of humoꝝs the choloꝝ.
And as some saie, he gouerneth the lyuer, bringe
of a read colour, euill of nature, his mettall is Iron
and steele, and in two yeares he endeth his course
thzough the. xii. signes in the zodiake.

The sunne is placed in the middle of al the pla-
nettes moſte cleare and brighte, the well of pure
light, he is the pꝛincipall planet in the firmament,
he is the cause of wynter and sommer, of the daye
and the night, being hoate and drie, louinge, ge-
uing life and light to all thinges, hauing natural
vertue, and of the members he ruleth the bꝛayne,
the marowe, the sight, the senues, and generally
all the members of the right part of the bodie, his
metal is pure golde, going thzough the. xii. signes
in. 365. daies. 5. houzes. 55. minutes. 13. secondes.

Venus is colde and moist, louinge, flegmaticke,
and of the body she gouerneth the backbone, the
buttockes, the lower part of the belly, and the ma-
tric, with the moneth sat, her colour is bright, per-
brighter then Jupiters, her mettall is copper, her
course is like the Sunnes course, neuer above. 48
degrees frō the Sunne, called the moꝝning star
oz vesper.

Mercury is next vnto Venus, somewhat shining

but not very bright, he is good with the good planetes, and euill with the euill, when he is joined with the, his metall is quicke silver, his course is like to the Sunnes course, neuer above. 29. degrees from the Sunne.

The Moone is lowest of all the Planetes, being colde and moist, of nature louing, hauing domination ouer the stomake & belly, and of the mother of women, and generally ouer the members of the lefte syde of the body, her metall is silver, running ouer the whole zodiacke in. 27. days and. 8. houres.

Furthermoze, you must note that Iupiter and Venus, be called good and fortunate, but Iupiter is called the greater good fortune, and Venus the lesse. Howe Saturne and Mars, bee called euill fortune, but Saturne is called the greatest vnfortunate, and Mars the lesse. The Sunne or Moone are called meane or betwene both, that is to say: neither fortunate nor vnfortunate, but indifferent.

The table of the contentes of these Rules folowing.

- 1 The first Rule is of a good Pauiгатоr.
- 2 The seconde Rule treateth of the. 32. wyndes, belonging to a Pauiгатоr, otherwyse called the 32. pointes of the Compass.
- 3 The thirde Rule treateth of the golden number or Prime, shewing the Epact, & by the Epact to knowe the age of the Moone.
- 4 The fourth Rule teacheth you to know by the

age of the moone whan it doth flowe at any place
where you doe knowe what moone maketh a full
Sea, with a tabell of tides toynd therto.

5 The fifth rule treateth of y^e Sunnes & Moones
course in the zodiacke, and how that you shal knowe
at what houre that the moone shall rise and set, &
at what point, and wynde, with other necessarie
things.

6 The sixt rule is of a table of declination for 3
yeares, exactly calculatied for every day of y^e moth.

7 The seventh rule sheweth you howe to take the
altitude of the Sūne, and by the height of y^e Sun
to knowe the Equinotiall, and by the altitude of
the Equinotiall, to know the elevatio of the pole
arlike, and howe that you shal behaue your selfe
with your Astralabe, with an ensample of graues
ende, and also howe to gette the true meridia, and
also of the Northeast and Southwesterly of
the compas, necessary for navigation, otherwile
called the variation of the compas.

8 The eight rule of the north starre, & howe that
ye should be taken vpon any of the eight principall
wyndes or pointes of the compas with an obser-
uation of the balastela or crosse staffe.

9 The ninth rule is of the sayling of vpon one of
the quarters of the compas in howe farre sayling
you doe rayse or laye a degree, and what you doe
departe from your meridian.

10 The .x. rule treateth of the soundinges, coming
from any place out of the Occidental Sea.

11 For to seeke vshant or the lezarde, and also all a-
longest till you doe come to the coast of Flaunders.

21 The

11 The. xi. rule teacheth of the longitude, although that it be very tedious.

12 The. xii. rule sheweth how many miles will in square to one degree of longitude in every several latitude betwene the Equinoctiall and any of the two poles.

13 The. xiii. rule teacheth of the longitude & the latitude of certaine of the most notable townes in Englande, and also how long that the moone doth chaunge at the one towne before the other, and also the diuersitie of the longest date in Sommer from Southhampton to the North or most place in Scotlande.

14 The. xiiii. rule is of the longitude and declination of. 12. notable fixed starres for navigation. with tables of their shining, and at what point of your compass that they doe both rise and sette, and also tables for every moneth in y^e yeaere, declaring at what houre and minute that they be south running from the first daye of every moneth to the. 15. and from the. 15. daye to the last day, and will continue this. 100. yeaere without much error.

15 The. xv. rule, how to sayle by the Globe.

16 The. xvi. how to know the houre of the day by the Compass.

The first Rule is of a good
Navigation.

Of all sciences that is vsed with vs in England, Navigation is one of the principall & most necessary for the benefite of our Realme and native countrey, and also most defensible against our enemies, because we bee enuironed rounde aboute

C. liii. with

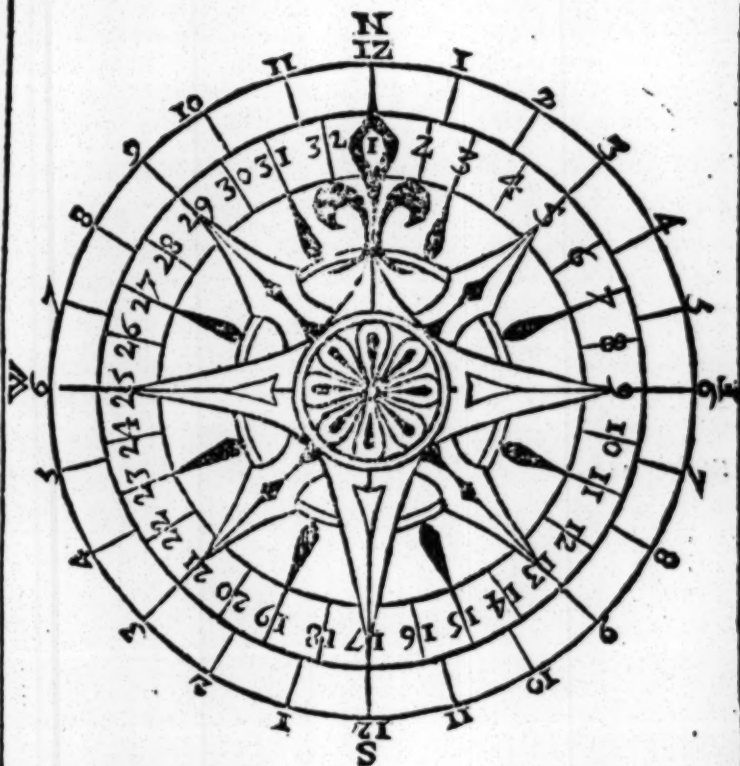
with the sea, and there be a great number of good
and wittie Nauigatozs, but notwithstanding some
simple, and therefore I would wishe those that be
Sea men of the meanest sorte (I meane those that
sayle for single hires) to practise one of these three
faculties, that is to saie: either to be a Conner, a
Carpenter, or els to be a Nauigatoz. For I do see
a great number that do occupie the Sea, that haue
no sight almoste at all in their science, although
they haue occupied the Sea a long time, whiche is
a straunge case, that those men that haue had the
dealing therewith to be vtterly boide of knowe-
ledge, their maisters to haue both knowledge and
conning, and they to bee altogether ignozant,
which is occasion that I do thinke that the expert
maisters in this doo seldome instruct their com-
panie: For if they did, there is no doubt but the
multitude would haue moze vnderstanding. But
wherefore should I waste time in wryting hereof,
seing it is instructions that must amend this fault.
Wherefore that you may the better vnderstande
or knowe my purpose, you shall vnderstande that
the good and wittie Nauigatoz, doth consider and
knowe by experience, that the moone doth rule the
floudes, or els he knoweth that in one Moone
there is two springes, & two nepes, the one spring
to be at the full moone or thre daies after, the o-
ther at the change, or within twoo or thre daies
after, and at both the quarters the nepe streames.
He doth knowe by experience, that the moone in
suche a quarter of the skie maketh a full Sea, so
that the raging wyndes doth neither bind: r the
same

name, nor cause it to be altered. He dothe knowe
how that the streame or floudes or ebbes, doth set
from place to place, from nas to nas, from poynt
to poynt, in euery place about the Coast that be
hath occupied. And the chiefest thinge that belon-
geth to a Sea faring man, is to knowe the place
that he shall happen to fall vith, whiche thing he
must knowe by the beholding of the countrey, by
taking some principall marke thereof, & the chief-
est thing is, to beholde the hilles and vales of the
lande, that he may knowe them when he shall hap-
pen to see them againe, vpon euery side he must
take heade. And as for wooddes and hedges with
suche like, are not to be marked, because suche
thinges may be cut or felled downe, and so your
marke is lost: Wherfore hilles, vales, cliftes, and
Castels, with Steples and Churches, are the beste
and most surest markes, that may or can be taken,
and are better then hedgrowes, wooddes or trees.
Furthermoze, the good and wittie Nauigatoz, by
the marke of the shoze doth knowe whether there
doth lie any daungers, as sandes, rockes, bankes,
or shelves: he knoweth by their soundinge howe
nere that he is vnto them, he doth knowe when
he hath any occasion to put into any herbowe.
whether he haue water enough, yea or nay. Fur-
thermoze, he doth knowe by his soundinge, of the
depth, and by the grounde that sticketh vpon the
callowe of the lead howe farre that he is shott, al-
though he may see no lade. Furthermoze, he doth
knowe when he is in the Occident Sea, by kee-
ping of his course, with what place he shall fall or
come

come to first, he knoweth howe farre that the ship
shippe hath runne or gone, and howe farre that
he hath to goe, by keeping of account or picking
of his card: he knoweth whether that the shippe
goeth to leewardes, or maketh his waye good: he
knoweth whether about the head of the land there
runneth any curraunt or not: He knoweth that
the indraftes of the land, causeth the tydes soe to
runne: he knoweth that the whyte waters or land
waters, causeth the ebbes to runne swifter then
the floudes: he knoweth that in runninge vp in
to a Ryuer, the further he runneth in a floude,
the longer tyde or flowing with him: he knoweth
that the salt water or sea water, is moze stronger
to beare a shippe then the frethe waters or ryuer
waters be. Furthermoze, he knoweth by the ta-
king of the altitude or height of the Sunne, in
what Parrell or Latitude he is in, considering the
Sunnnes declination, howe farre that he is aboue
or beneath the Equinocual lyne. And furthermoze
they doe knowe their Latitude or parrell by diuers
starres fixed in the firmamēt, as by *Oculus tauri*,
as *Oxione*, his girdell, his shoulders, his secte, and
also *Alober*, or other wyse called the great Dogge
and little dogge, with diuers other starres whiche
I passe ouer. And some doe obserue the *South* star
being the tippe of the tayle of *Ursa minor*, or little
beare, but many may be deceiued in taking of him.
But soe them whiche doe occupie the South, he is
very good, so that they doe knowe the whole com-
passe of remouing. And soe them that doe occupie
the North, he wil not serue their iournes, because
his

his altitude is so great that your balastela wyl
not take him perfecte.

The second chapter of Rule, teacheth the. 32.
wyndes belonging to Nauigation, other,
wyle called the. 32. pointes of
the Compass.



As touching Nauigation, for the instruction of
the meanest sort, I haue set this figure of compass
where first is to be noted the. 32. wyndes or pointes of the
compass

compas aboue made. The flower deluce is the first
 point, and these be the names beginninge at the
 North, and so with the course of the Sūne, to saye
 North. 1. North and by East. 2. North north east. 3.
 North east & by north. 4. North east. 5. Northeast
 by east. 6. East northeast. 7. East and by north. 8.
 East. 9. East and by south. 10. East southeast. 11.
 Southeast and by east. 12. Southeast. 13. Southeast
 and by south. 14. South south east. 15. South & by
 east. 16. South. 17. South and by west. 18. South
 south west. 19. Southwest & by south. 20. South
 west. 21. Southwest and by west. 22. West
 south west. 23. West and by south. 24. West. 25.
 West and by north. 26. West north west. 27.
 North west and by west. 28. North west. 29.
 North west and north. 30. North north west. 31.
 North and by west. 32. This is the whole con-
 tentes of the. 32 wyndes: And there is in the com-
 passe the contentes of the great circle of equinocti-
 all circle, being. 360. degrees in compasse, so that
 every point containeth. 11. degrees and. $\frac{1}{4}$. and. 4.
 pointes containe. 45. degrees. 8. pointes contay-
 neth one quarter of the compasse of equinoctiall
 circle, being. 90. degrees. 16. pointes, containeth
 halfe the circumference. 180. degrees, and every
 degree containeth. 60. secondes, and so forth.

Furthermore, the. 32. pointes containe. 24. houres
 that is to saye, one point containeth. 3. quarters
 of an houre. 45. minutes, and. 2. pointes, one houre
 & a halfe. 4. pointes. 3. houres. 8. pointes. 6. houres
 12. pointes. 9. houres. 16. pointes. 12. houres: and so
 to the rest of the pointes and every houre, contay-

neth. 60. minutes, and every halfe houre. 30. min.
and every quarter of an houre is. 15 minutes, and
after that rate. 45. minutes maketh. 3. quarters of
an houre.

The third Rule, teacheth of the golden
number or Prime, shewing the Epact,
and by the Epact to knowe the
age of the Moone.

It is necessary and convenient for the Seafaring
men, to knowe the Prime or golden number, &
by the golden number is knowen the Epact, and
the Epact sheweth the age of the moone or change
days, within. 12. daies vnder or over, and by the
age of the moone, you may knowe what a clock it
doth flowe in any place that you do knowe, what
moone doth make a full sea. Therefore it is meete
to knowe the Epact, and that is knowen by the
Prime or golden number. (The cause why it was
called the golde number, was because it was sent
out of Egypt in letters of golde to the Romaines
or citie of Rome.) And it is thus knowen, adde
one to the ycare of our Lozde that ycare that you
would knowe the golden number or Prime, then
deuide the number by. 19. the remainer is the
Prime, then take the prime and multiplie that by
11. and looke what the number cometh vnto, de-
uide that by. 30. the remainer is the Epact, then
when ye haue once the Epact, put. 11. for every
ycare moze then your Epact, and looke what that
cometh to, that is your Epact, and if it doe passe
30. put

39. put that away and kepe the remainer for your Epact, and thus this Rule will serue for euer, figuring when the Prime beginneth at one, and when the Epact is. 11. and then doing as aforesaide, as you may perceiue by this table hereunder made.

The tabel of the Prime & Epact for 19. yeares, and when those 19. yeares are finished or ended, they beginne againe, and so it will serue for euer.

The first rowe is the yeare of our Lord,
the second is the Prime, the third
rowe is the Epact.

Yeere of our lord	Prime.	Epact.	yeere of our lord	Prime.	Epact.
1566	9	9	1576	19	29
1567	10	20	1577	1	11
1568	11	1	1578	2	22
1569	12	12	1579	3	3
1570	13	23	1580	4	14
1571	14	4	1581	5	25
1572	15	15	1582	6	6
1573	16	26	1583	7	17
1574	17	7	1584	8	28
1575	18	18			

The Prime or golden number, is the time of 19. yeares, in the whiche time the moone maketh all her changes or conjunctions with the Sonne, and when all these 19. yeares be expired, then she beginneth againe, as in example, this yeare being the

the yeare of our Lorde, 1566. she chainged the. 21.
daie of Marche, and euer yeare doth al. er. 11. dayes
of her chaunge till the yeare. 1585. & then she chaun-
geth the said. 21. daie of Marche againe, as I shew
you before, the Epact is the putting to. 11. for
euery yeare. Nowe furthermoze, to knowe the age
of the moone, do this take your n^ober of the Epact
for your yeare, then beginne in March alwaies, &
then reken how many monethes it is from March
reken Marche for one, & then reke how many dayes
of the moneth it is that you would knowe the age
of the moone, then put all your n^obers together,
that is to saye: your Epact, your monethes from
March, your daies of the moneth, then looke how
many that cometh vnto that, is the age of y^e moone
and if it do passe. 30. throwe all the. 30. away & kepe
that that will not be. 30. for the age of the moone:
if iust. 30. then it is the chaunge daie, and if it be y^e
15 daie of the age of the moone, then the moone is
at the full, then betwene. 7. daies and. 8. of the first
quarter: and if. 22. daies olde, then the moone is at
the last quarter, as for an example, this yeare. 1567
and I finde the Epact. 20. for the yeare, nowe I
would knowe the age of the moone the. 13. daie of
June, now I reken howe meny monethes it is fro
March, rekening March for one, & I finde it is. 4.
monethes, then I take & adde al these together, that
is to say. 20. for the Epact. 4. for the monethes, that
is to say, March, Aprill, May, & June, & the. 13. for
the daies of the month, & al cometh to. 37. the I put
away the. 30. & there remaineth. 7. y^e is the age of y^e
moone, & walke at the first quarter the same night.

The fourth Rule teacheth howe to knowe by
the age of the moone when it doth flowe at
any place, where you doe knowe
what moone maketh a ful sea.

Nowe by the age of the moone you may knowe
what a clock that floweth in any place where
you doe knowe what moone maketh a full Sea,
whiche rule commonly the sea men call the shif-
ting, there Sunne and Moore and many wayes
there be to doe, that for this they may doe it, lette
them put one ouer into .5. partes, and then take .4.
of those partes and put the one fifth part a waye,
that serueth for the alteration of .24. houres, and
the foure fife part of an houre is .48. minutes, and
the fift part of one houre, is .12. minutes. And
floudde and an ebbe, dothe alter .24. minutes for-
wardes, as this for example: It floweth at .12. of
the clocke at the landes ende vppon the change
daye, the moone being in the South at all tymes
a full Sea, the moone being one daye old, it flow-
eth at .12. of the clocke .48. minutes: Two dayes
olde, it floweth at one of the clocke .36. minutes:
Thre dayes olde, it floweth at two of the clocke
.24. minutes. Foure dayes olde, it floweth at thre
of the clocke .12. minutes. Fife dayes olde, it flow-
eth at .4. of the clocke iust. Sixe dayes old, it floweth
at foure of the clocke .48. minutes. Seven dayes
olde, at .5. of the clocke .36. minutes. Eight dayes
olde, at .6. of the clocke .24. minutes. Nine dayes
olde, at .7. of the clocke .12. minutes. Tenne dayes
olde, it floweth at .8. of the clocke iust. Eleue dayes
olde

10. at 8. of the clock. 48. minutes. 12. daies at 9. of
 the clocke. 36. minutes. 13. daies olde. at 10. of the
 clock. 24. minutes. 14. daies olde, it floweth at 11.
 of the clock. 12. minutes. 15. daies olde, it floweth at
 12. of the clocke last; then being the full moone: and
 then beginne againe as you did befoze at one daye
 olde, and so forth. For the course of the tydes is
 nothinge els, but to put for euery daye of the age
 of the moone one houre, pulling backe the fift
 part of an houre, being 12. minutes, and by this
 account you may at all times knowe when that
 it both flowe, by putting to euery flood and ebbe
 24. minutes, and two floodes and two ebbs, put
 ting to. 48. minutes. Nowe furthemoze, the sea
 men use to make their account by this meanes, &
 it is all one matter, they doe allowe for euery
 daye of the age of the moone one point and thre
 minutes: for a point of the compas containeth. 45.
 minutes, that is thre quarters of one houre,
 then put 3. minutes to. 45. minutes, it maketh. 48.
 minutes; and the same 3. minutes, be the 15. part
 of a point, and from the chaunge to the full is. 15.
 dayes, then the halfe compas beinge. 16. pointes,
 breake the odde point into 15. partes, and that co-
 meth to. 3. minutes, so that the alteration of the
 tydes for euery. 24. houres to be. 48. minutes, the
 4. fine partes of an houre, therefore shall folowe a
 table of tydes, about certain places of this Realme
 for euery moone containeth. 29. daies, 12. houres,
 44. minutes, from chaunge to chaunge, and the
 whole content of the houres of the moone is. 708.
 houres 44. minutes, and there is in euery yeare. 12

Daunges of the moone, and the yeare containeth
365. daies. 6. houres. 55. minutes. 13. secondes, yet
some doe affirme to be oddes. 6. houres, but there
lacketh. 4. minutes. 47. secondes in the tropicall
yeare, and in the yeare is. 12. monethes agreeable to
the. 12. moones. The. 12. moones containeth. 354.
daies, so there be. 11. daies moze in the yeare then
there be in the. 12. moones, and the yeare is deui-
ded into. 12. monethes, whiche monethes hath ta-
ken their names at the will and pleasure of men,
as January was so called of Janus, because of. 2.
hazes. For that the month of January beholdeth
the ende of the yeare past, and the beginninge of
the yeare to come. February toke his name of cer-
taine Romaines sacrifices called Febua. Marche
is so called of Mars, for Romulus so named it af-
ter his father. Aprill comes of Aprilio, because that
then the earth is opened. May of Maia, the mother
of Mercury. June so called by preparinge to the
warre. July of Julius Caesar. And August of Au-
gustus Caesar, for in that moneth he entred the
counsellship. Then the rest of the monethes tooke
their names of their nombze from Marche. Pome
these. 12. monethes whiche maketh the yeare, the
Sunne doth passe or go thzough the zodiake, cal-
led the. 12. signes, which is the occasio of the yeare.
For this is to be noted, that the Sunne as I saide
befoze, doe goe by his naturall mouinge in. 365.
daies. 6. houres. 55. minutes. 13. secondes, thzough
the zodiake, contayning. 360. degrees, his course
being against the. 24. houres going from the weast
into

into the East, against the courſe of primum mobile or firſt mouer, beinge moued by the mightie prouidence of God which maketh the. xxiij. houres and ſo doth all the ſeuē lightes or Planetes, except that it be in their retrogratiō, but the Sunne and the moone be neuer retrograte as the other ſiue Planetes or lightes be. And this is to be noted, that the moone goeth farther then the Sunne for ſhe goeth throught the whole zodiack in. xxvij. daies and eight houres. Nowe in that ſame tyme the Sunne is remoued by his naturall mouyng from that place of the zodiack, neare ſeuē and twenty degrees, and then becauſe that the moone hath not ſounde the Sunne there, it is two daies ſoure houres ſoure and ſourty minutes moze befoze that the moone overtaketh the Sunne again. So by that meanes, it is. xxij. dayes. xij. houres, and. 44. minutes betweene the change of the moone and the next change, and ſometime in the yeaere you ſhall ſee the moone rather then at ſome, as this from January to June, you ſhall ſee the moone in ſolwe and twenty houres after the change, becauſe ſhe hath ſouth declination of the Sunne, and maketh a bygger arche then the Sunne.

From July to December, you ſhall not ſee the moone three dayes after, becauſe her Latitude is to the ſouthe part of the Sunne, but you may ſee her in. xxij. houres befoze her change. Nowe the Sea men doe Imagyne a Prime daye, which is the half quarter of y moone, that is, when y the

moone is thzee daies and .18. houres olde, then the moone being .4. pointes to the Eastwardes of the Sunne, whiche is thzee houres: Powe they maye in like case obserue that same rule when that the moone is past the full thze daies and .18. houres, & also in the middes of the quarters.

Now shall folowe a table of Tydes, and first the moone South or North, on landes ende full Sea.

The moone South and by East, at the Boze end full Sea.

The moone South south west, betwene holy Glande and Tynemouth full sea.

It floweth betwene Tynmouth and Flambo-
rowe head, South west and north east moone.

It floweth betwene Flambozowe head & Boz-
lyng towne in the Bage, a South west and by
west moone.

The moone in the west south west, betwene
Bozlyng towne and Laurenas, full sea.

It floweth betwene Laurenas and Cromer, all
alongest the welles, an east and west moone.

It floweth betwene Cromer and Warmouth
Kode to Laystowe north Kode, a South east
moone.

It floweth betwene Laystowe Kode and Or-
fordenas, a south east and by south moone.

It floweth betwene Orfode & Orwell wades
a south south east moone.

It floweth betwene the Passe and the Ware
head of Colne, a south and by east moone.

It floweth at the Spyttes and at the Whene,
all alongest the Swinne, a south moone.

It floweth at the West ende of the Forth, a
south and by west moone full sea.

It floweth at Graues ende, a south south west
moone.

It floweth at London brydge a South west
moone.

It floweth at the North foze lande, a south south
east moone, and so alongest the coast, tyl you come
to Beche, and in the Oskunne from the North
foze lande to the South foze lande, it runneth halfe
tyde, and from the South foze lande to the Passe,
the tyde runneth halfe yde halfe quarter. And
from the Passe to the fayr, it runneth half tyde.
And fayrly to Beche, it runneth quarter tyde vn
der other.

It floweth to the Westward of Beche a kenying,
a south east and by south moone.

It floweth at Portes mouth, a south and by east
moone.

It floweth at Saint Ellens, a south south east
moone.

It floweth on the Sea side of the Land, a south
east and by south moone, and so on the lande, and
at the Beadels, and runneth quarter tyde in the
Oskunne.

It floweth at Pooll in the haven, a south east
moone.

It floweth at Wamouth, a east & west moone.

It floweth at Portlande, a southeast moone.

It floweth from the West part of Portlande
till you come to Plymmouth an east & west moone

It floweth on the shore from Plymmouth to

the Lizarde, a weast and by south moone, and in
the Estonne, a southeast moone.

It floweth at South baye, an East and Weast
moone.

It floweth at Selly, a weast & by south moone.

It floweth at the landes ende of goolfe, a weast
southweast moone, and all alongest the coste by to
Bysslowe, and the coaste of Irelande, from Wa-
terfoord to Lynsale, a weast and by south moone.

Nowe furthermoze, it floweth for the most part
from the Polle head of Wycheur, all alongest the
coaste of Byskep, Calys, & Portingale, tyll you
come to the straighes of Walys, a South
weast and southeast moone.

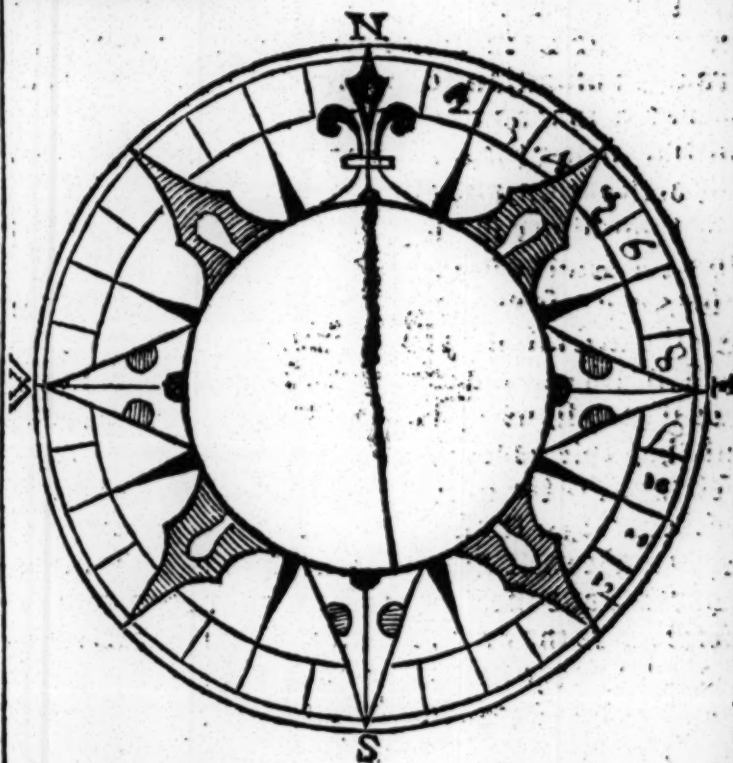
It floweth at Flouthing, a Southweast and by
South moone.

It floweth at Anwarpe, an East and Weast
moone.

It floweth all alongest the Coast of Flannners
from the Wyldinges to Calys, a South and by
East moone, and so runneth halfe a tye vnder the
other.

Nowe here is one speciall thinge to be noted,
and that is this, it floweth one poynt of the Com-
pass moze in the spryng streames then that it doth
in any of the quarters of the moone, so that it be a
Ryuer where there is any indraft, hauinge dy-
stance from the Sea, when there is neyther
rage of wyndes noz no cause, neyther to hynder
noz forder the sayd effect. As soz example, thus it
floweth at Grauesende at the chaunge of the
moone oz full, a South south weast moone, but
in any

In any of the quarters of the Moone, it scant floweth a south and by weast moone, - and this is generally for ever.



The fifth Rule, teacheth of the Sunnes and Moones course in the zodiacke, and howe you shall knowe at what houre the Moone shall rise, and at what point of the compass, with other necessary things.

D. iiii.

Further

Furthermore, the Sunne by his naturall mo-
ving thzough the .12. Signes in the zodiacke, in
the yeare doth cause the height and lowenes of his
declination, which is necessary for the Sea faring
men, to knowe in which declination they doe take
from Equinoctiall to Equinoctiall. And this is to
be noted, that as the Sunne hath declination, so
in like manner the Moone hath declination, and by
our declination, and also of the Sunne, is knowne
the tyme of her rising, or biding about our Lori-
son, the Sunne by moone in the first minute of A-
ries, they rylse east and set west, & shyne .11. houres
In the first minute of Taurus they rylse neare the
east, north east, and sette neare the west north
west, and shyne .14. houres: In the signe of Gemi-
ni, they rylse neare the north east, and by east, and
settes neare the north west and by west, & shyne
.16. houres: In the signe of Cancer the first minute,
they make their greates declination to the north
wardes, and then they rylse neare the northeast, &
sette neare the north west, and shyne neare .17.1.
houres: In the first minute of Leo, descending to
wardes the Equinoctiall as they did in Gemini, &
in the signe of Virgo, as they did in Taurus: and
in the first minute of Libra, Equinoctiall, begin-
ning south declination as in Aries: And in the
first minute of Scorpio, they rylse neare the east,
south east, and settes neare the west south west,
and shyneth .10. houres. In the first minute of Sa-
gitarius, they rylse neare the south east and by
east, and settelh neare the south west & by west,
and shyneth .8. houres: In the first minute of Capri-
cornus,

coznus, then they haue their greater declination
to the south, and beginneth to retourne to the E
quinotiall, rising neare the south east, and setteth
neare the south west, and shineth moze than. vii.
houres: In the first minute of Aquarius, as in Sa
gittari⁹: In the first minute of Pisces, as in Sco
pio. And now by this rule you may knowe the ri
sing and setting of the Moone for ever: as this, as
I haue shewed you befoze in the shiftinge of the
Sunne and Moone. That for every daie of the a
ge of the moone, the moone goeth to the eastward
one point and. 3. minutes; and two daies. 2. points
and. 6. minutes. Nowe when you liste to knowe
the very houre and tyme of his rising, looke howe
many daies the moone is olde, and then put so ma
ny pointes and so many. 3. minutes, the like what
that cometh vnto, and nowe for your better exam
ple, I will shewe you the moones bringe South
for every daie of the age of the moone. The moone
being one daie olde, the moone is South at. 12. of
the clocke. 48. minutes. The moone bring two
daies olde, south at one of the clock. 36. minutes in
the after noone. Three daies olde, south at two
of the clocke. 24. minutes. Four daies olde, at. 3.
of the clocke. 12. minutes. Five daies olde, at. 4. of
the clocke iust. Six daies olde, at. 4. of the clocke.
48. minutes. Seven daies olde, at. 5. of the clocke,
36. minutes. Then when the moone is iust a quar
ter olde, south at. 6. of the clocke at night. Then at
8. daies olde, the moone is south at. 6. of the clocke
24. minutes. At. 9. daies olde, at. 7. of the clocke. 12.
minutes. At. 10. daies olde, at. 8. of the clocke iust.

At

At. xi. daies olde, at. viii. of the clock. 48. minutes.
 At. xii. daies olde, at. ix. of the clocke. 36. minutes.
 At. xiii. daies olde, at. x. of the clocke. 24. minutes.
 At. xiiii. daies olde, at. xi. of the clocke. xii. minutes.
 At. xv. daies olde, the full moone, then the moone
 is South at midnigh: then one daie after, the full
 moone South at. xii. of the clocke. 48. minutes in
 the morning. Two daies after the full, at one of
 the clocke. 36. minutes. Three daies after, at two
 of the clocke. 24. minutes. Foure daies after, at. 3.
 a clock. 12. mi. Five daies after, at. 4. of the clocke
 iust in the morning. Sixe daies after, at. 4. of the
 clock. 48. minutes. Seven daies after, at. 5. of the
 clock. 36. minutes. Then when the moone is thre
 quarters olde, south at. 6. a clock in the morninge.
 At. 8. daies after, at. 6. a clock. 24. minutes. ix. daies
 after, at. 7. a clock. 12. minutes. x. daies after, at. 8.
 a clock iust. xi. daies after, at. 8. a clock. 48. min. xii.
 daies after south, at. 9. a clock. 36. minut. xiii. daies
 after south, at. 10. a clock in the fore noone. 24. mi.
 xiiii. daies after, at. 11. of the clock. 12. min. then at
 15. daies after the moone both chaunge being then
 with the Sunne. For the chaunge of the moone is
 when the moone and the Sunne be both vnder one
 like degre and minute of any signe of the zodiack.
 And the full moone is, when that the Sunne and
 moone be appositue, the one directly against the
 other iust. 6. signes asunder, as you may perceine
 at the full moone, for then when the moone riseth
 the sunne setteth, and when the Sunne riseth the
 moone setteth: and then in any of the quarters the
 sunne and moone be iust. 3. signes asunder, that is
 in a

last. 90. degrees. Nowe when you litle for to know
the very time of the moones rising or setting, then
loke in your kalender in what signe & degree the
moone is in, then according to the rule of Winning
deuide that into two equal partes then from the
South, so shall you see at what houre the moone
riseth: as for example this. In Marche alwaies the
Sunne is in Aries, then the moone beinge in her
first quarter, the she is. 6. houres to the eastwardes
of the Sunne, then the moone must nedes be in
Cancer, then shineth the moone in our horizon. 17.
houres, then the moone is south at. 6. of the clocke
then she shineth. viii. houres and a halfe after. vi.
of the clock, so that she setteth at two of the clock
and halfe an houre past: then she riseth in the daye
viii. houres and a halfe before. vi. of the clock, that
is at. ix. of the clock and halfe an houre past. Nowe
at the last quarter in Marche, then the moone must
nedes be in Capricornus, then shineth the moone
but. vii. houres, then the moone is south at. vi. of
the clock in the morning, then the moone riseth. 3.
houres and a half before, that is at two of the clock
and half an houre past in the morning, then she set-
teth by day at. 9. of the clock & halfe an houre past:
and this rule wil serve for enier without any great
erro2. But yet there is a further matter for y^e exact
doing, which is the Latitude of the moone, fro the
head or taile of the Dragon, but that is but a trifle
in the respect of much erro2, & therefore I will not
trouble you with y^e. yet there is one thing which I
wold seafaring m^e shold consider, although a great
n^ober be expert in y^e, yet it is mete to be spok^e of as
this.

this, the Sunne beinge in Cancer, or moone in
like maner, or in Gemini, or any time when the
Sunne or moone hath north declination, they will
sette their compasse befoze them, and when they
see the Sunne to giue an east shadowe, they will
saye that it is. vi. of the clocke, whiche and if the
Sunne be in Cancer, it is not muche past. v. of the
clocke, and the more to the southwardes, the more
they doe erre. And in lyke case of the Moone being
in Cancer, when they doe see the moone geue an
east shadowe by their compas, they will saye the
moone is west, but they doe not consider that the
Sunne and Moone being in Cancer, be excentricke
and make their center without the earth, which is
the very height of their declination, comminge so
neare to them, therefore they must iudge the east
or west from the pole or north starre. If that they
will iudge truly, therefore I doe much commend
the Equinoctiall dialles, for the exact truthe: For
the common people cannot iudge the truthe by
their compas, so that the Sunne or moone, or any
other starre, be excentricke, being in Cancer. And
you must consider this in lyke maner, the Sunne
hauing north declination, the further you doe go
to the northwardes, the longer is your daye, and
shorter is your night, and towardes the south-
wardes the shorter daies and longer nights.
Nowe contrariwise, the Sunne hauing south de-
clination, the more to the northwardes, the short-
er daies and longer nights, the further to the
southwardes, the longer daies and shorter nights,
and vnder the Equinoctiall, the nights and daies
all

all one, what declination doer the Sunne haib.
But this rule y I haue geuen you, is for London or
any other place that haib what Latitude or eleva-
tion of the pole arttike, at. 51. or. 52. degrees.

The first Rule, is of a tabell of declination
for. iii. yeares, exactly calculated for
euery daie of the moneth.

Now we shall soloue a table of Declination for
iii. yeares, bringe exactly calculated for En-
glande, and will serue all Europe without muche
errour, or any other contrey or place that hath our
longitude, as the most part of Africa, as China
and these partes to the South, as farre as the an-
terticke pole being done for euery daie of the mo-
neth, very necessary for Nauigation, and moze ex-
act then the regimentes for foure yeares, or any
other tables of declination, for this you must con-
sider, that by the tabels of declination, you cannot
knowe what declination the Sunne haib, except
you doe knowe what degree and minute that the
Sunne is in at noone of the eclipticke lyne, which
I am suer that a great number of the Sea men
doe not knowe, although certaine of them can cal-
culate the Sunes declination out of the Ephime-
rides, the greatest number can not. Therefore I
thought it conuenient to calculate these tables fo-
lowing, and the first rowe towards your left
bande, be the daies of the moneth, the next be the
degrees of declination, and the thirde, the odde mi-
nute belonging to declination. Nowe, there is
twoo

two tymes in the yere, that the Sunne hath no
declination. Nowe this yere. 1567. the. xi. daye
of Marche, at. vi. of the clocke at after noone, the
Sunne is equinoctiall, beginning North declina-
tion, then the. xiii. of September at twoo of the
clocke in the moorning, the Sunne is equinoctiall be-
ginning south declination. Nowe the yere. 1568.
the. x. of Marche at. xii. of the clocke at midnight,
the Sunne is Equinoctiall, then the. xiii. of Sep-
tember in lyke maner equinoctiall at twoo of the
clocke at after noone, then the yere. 1569. the. xi.

daye of Marche at. vi. of the clocke in the mo-
orning, the Sunne is Equinoctiall, then
the. xiii. of September at. iiii. of
the clocke in the moorning,
the Sunne is equino-
ctiall, beginneth
south decli-
nation.

1567. Jan. Febua. Marche. Apull.

D. C. M. D. C. M. D. C. M. D. C. M.

1	21	57	1	14	20	1	4	2	1	8	0
2	21	48	2	14	1	2	3	39	2	8	23
3	21	39	3	13	38	3	3	15	3	8	44
4	21	28	4	13	18	4	2	51	4	9	6
5	21	18	5	13	0	5	2	27	5	9	28
6	21	7	6	12	37	6	2	3	6	9	50
7	20	56	7	12	17	7	1	40	7	10	11
8	20	45	8	11	56	8	1	16	8	10	32
9	20	32	9	11	35	9	0	52	9	10	53
10	20	20	10	11	14	10	0	28	10	11	14
11	20	6	11	10	51	11	0	6	11	11	35
12	19	53	12	10	30	12	0	18	12	11	55
13	19	40	13	10	8	13	0	40	13	12	14
14	19	25	14	9	46	14	1	5	14	12	36
15	19	10	15	9	24	15	1	29	15	12	55
16	18	56	16	9	2	16	1	53	16	13	15
17	18	41	17	8	39	17	2	16	17	13	34
18	18	26	18	8	17	18	2	39	18	13	53
19	18	11	19	7	54	19	3	3	19	14	13
20	17	54	20	7	32	20	3	27	20	14	31
21	17	37	21	7	9	21	3	51	21	14	51
22	17	21	22	6	46	22	4	12	22	15	9
23	17	4	23	6	23	23	4	37	23	15	26
24	16	47	24	6	0	24	4	59	24	15	44
25	16	29	25	5	36	25	5	23	25	16	2
26	16	12	26	5	13	26	5	46	26	16	19
27	15	54	27	4	49	27	6	8	27	16	36
28	15	35	28	4	25	28	6	32	28	16	54
29	15	1				29	6	54	29	17	10
30	14	58				30	7	17	30	17	26
31	14	39				31	7	39			

May.			June.			July.			August.		
D.	G.	M.	D.	G.	M.	D.	G.	M.	D.	G.	M.
1	17	43	1	23	4	1	22	17	1	15	14
2	17	58	2	23	8	2	22	9	2	15	16
3	18	12	3	23	11	3	22	0	3	14	58
4	18	28	4	23	14	4	21	52	4	14	39
5	18	42	5	23	17	5	21	43	5	14	22
6	18	56	6	23	20	6	21	36	6	14	3
7	19	11	7	23	22	7	21	26	7	13	43
8	19	25	8	23	24	8	21	16	8	13	44
9	19	37	9	23	26	9	21	5	9	13	4
10	19	51	10	23	27	10	20	54	10	12	45
11	20	3	11	23	28	11	20	43	11	12	26
12	20	15	12	23	28	12	20	32	12	12	6
13	20	27	13	23	28	13	20	20	13	11	45
14	20	39	14	23	27	14	20	7	14	11	25
15	20	51	15	23	26	15	19	54	15	11	4
16	21	1	16	23	24	16	19	42	16	10	43
17	21	11	17	23	22	17	19	28	17	10	22
18	21	22	18	23	20	18	19	14	18	10	2
19	21	32	19	23	18	19	19	0	19	9	40
20	21	41	20	23	16	20	18	46	20	9	19
21	21	50	21	23	12	21	18	31	21	8	58
22	21	59	22	23	8	22	18	17	22	8	35
23	22	7	23	23	3	23	18	2	23	8	13
24	22	16	24	22	59	24	17	47	24	7	51
25	22	23	25	22	55	25	17	31	25	7	30
26	22	31	26	22	50	26	17	14	26	7	7
27	22	37	27	22	46	27	16	57	27	6	45
28	22	44	28	22	39	28	16	39	28	6	33
29	22	51	29	22	32	29	16	25	29	6	0
30	22	55	30	22	25	30	16	8	30	5	37
31	23	0				31	15	52	31	5	14

Septemb.			October.			Novemb.			Decemb.		
D.	C.	M.	D.	C.	M.	D.	C.	M.	D.	C.	M.
1	4	52	1	6	45	1	17	17	1	22	58
2	4	29	2	7	8	2	17	34	2	23	3
3	4	6	3	7	31	3	17	50	3	23	7
4	3	43	4	7	53	4	18	6	4	23	12
5	3	21	5	8	16	5	18	22	5	23	15
6	2	57	6	8	38	6	18	37	6	23	19
7	2	33	7	9	1	7	18	52	7	23	22
8	2	10	8	9	23	8	19	7	8	23	24
9	1	48	9	9	45	9	19	21	9	23	25
10	1	24	10	10	7	10	19	35	10	23	26
11	1	11	11	10	28	11	19	49	11	23	27
12	0	36	12	10	49	12	20	2	12	23	28
13	0	15	13	11	11	13	20	16	13	23	28
14	0	10	14	11	32	14	20	29	14	23	28
15	0	34	15	11	53	15	20	41	15	23	27
16	0	57	16	12	14	16	20	53	16	23	26
17	1	20	17	12	35	17	21	4	17	23	24
18	1	44	18	12	55	18	21	14	18	23	21
19	2	8	19	13	15	19	21	25	19	23	18
20	2	31	20	13	35	20	21	35	20	23	14
21	2	53	21	13	55	21	21	45	21	23	10
22	3	17	22	14	15	22	21	54	22	23	5
23	3	41	23	14	34	23	22	3	23	23	1
24	4	4	24	14	53	24	22	11	24	22	55
25	4	27	25	15	12	25	22	18	25	22	50
26	4	50	26	15	30	26	22	26	26	22	44
27	5	14	27	15	49	27	22	33	27	22	37
28	5	37	28	16	7	28	22	40	28	22	32
29	5	59	29	16	25	29	22	47	29	22	25
30	6	25	30	16	42	30	22	52	30	22	17
			31	17	0				31	22	9

1568. Jan. Febua. Marche. Aprill.

D. C. M. D. C. M. D. C. M. D. C. M.

1	21	0	1	14	21	1	3	45	1	8	15
2	21	50	2	14	4	2	3	22	2	8	37
3	21	41	3	13	44	3	2	58	3	8	59
4	21	31	4	13	26	4	2	34	4	9	21
5	21	21	5	13	3	5	2	10	5	9	43
6	21	10	6	12	42	6	1	47	6	10	4
7	20	59	7	12	32	7	1	23	7	10	26
8	20	48	8	12	12	8	0	59	8	10	47
9	20	35	9	11	40	9	0	36	9	11	9
10	20	22	10	11	19	10	0	12	10	11	29
11	20	9	11	10	58	11	0	12	11	11	50
12	19	56	12	10	36	12	0	36	12	12	10
13	19	43	13	10	15	13	1	0	13	12	30
14	19	28	14	9	55	14	1	24	14	12	50
15	19	14	15	9	31	15	1	48	15	13	9
16	19	0	16	9	8	16	2	11	16	13	29
17	18	45	17	8	46	17	2	34	17	13	48
18	18	30	18	8	23	18	2	58	18	14	7
19	18	15	19	8	0	19	3	22	19	14	26
20	17	59	20	7	37	20	3	45	20	14	44
21	17	42	21	7	15	21	4	8	21	15	3
22	17	26	22	6	52	22	4	32	22	15	21
23	17	9	23	6	29	23	4	54	23	15	39
24	16	52	24	6	6	24	5	17	24	15	56
25	16	34	25	5	42	25	5	39	25	16	14
26	16	17	26	5	19	26	6	1	26	16	31
27	15	59	27	4	56	27	6	25	27	16	47
28	15	39	28	4	32	28	6	48	28	17	3
29	15	20	29	4	9	29	7	10	29	17	20
30	15	1				30	7	32	30	17	36
31	14	42				31	7	54			

Day.	May.			June.			July.			August.		
	M.	D.	W.	M.	D.	W.	M.	D.	W.	M.	D.	W.
15	1	17	51	1	23	6	1	22	13	1	15	24
37	2	18	7	2	23	10	2	22	5	2	15	6
59	3	18	22	3	23	13	3	21	58	3	14	48
21	4	18	37	4	23	17	4	21	49	4	14	29
43	5	18	51	5	23	20	5	21	40	5	14	12
4	6	19	5	6	23	22	6	21	30	6	13	52
26	7	19	18	7	23	24	7	21	20	7	13	33
47	8	19	31	8	23	26	8	21	19	8	13	13
9	9	19	44	9	23	27	9	20	58	9	12	54
29	10	19	58	10	23	27	10	20	47	10	12	35
50	11	20	9	11	23	28	11	20	36	11	12	14
10	12	20	22	12	23	28	12	20	24	12	11	54
30	13	20	34	13	23	27	13	20	12	13	11	36
50	14	20	46	14	23	26	14	19	59	14	11	15
9	15	20	57	15	23	24	15	19	46	15	10	54
29	16	21	8	16	23	22	16	19	32	16	10	32
48	17	21	18	17	23	21	17	19	19	17	10	12
7	18	21	29	18	23	20	18	19	6	18	9	50
26	19	21	38	19	23	17	19	18	52	19	9	28
44	20	21	47	20	23	13	20	18	37	20	9	6
3	21	21	56	21	23	10	21	18	22	21	8	46
21	22	22	4	22	23	6	22	18	7	22	8	24
39	23	22	12	23	23	3	23	17	52	23	8	2
56	24	22	20	24	22	58	24	17	36	24	7	40
14	25	22	27	25	22	52	25	17	21	25	7	19
31	26	22	34	26	22	46	26	17	6	26	6	57
47	27	22	41	27	22	39	27	16	48	27	6	34
3	28	22	47	28	22	31	28	16	33	28	6	12
20	29	22	53	29	22	29	29	16	16	29	5	48
36	30	22	57	30	22	22	30	15	59	30	5	26
	31	23	3				31	15	41	31	5	4

September October. November. December.

D. S. M. D. S. M. D. S. M. D. S. M.

1	4	41	1	6	58	1	17	26	1	23	1
2	4	18	2	7	20	2	17	43	2	23	5
3	3	55	3	7	43	3	17	59	3	23	10
4	3	32	4	8	5	4	18	15	4	23	13
5	3	9	5	8	28	5	18	31	5	23	17
6	2	45	6	8	51	6	18	46	6	23	20
7	2	22	7	9	13	7	19	1	7	23	22
8	1	59	8	9	35	8	19	16	8	23	24
9	1	36	9	9	57	9	19	30	9	23	26
10	1	12	10	10	18	10	19	44	10	23	27
11	0	52	11	10	40	11	19	59	11	23	28
12	0	26	12	11	1	12	20	11	12	23	28
13	0	12	13	11	23	13	20	23	13	23	28
14	0	24	14	11	44	14	20	35	14	23	27
15	0	50	15	12	4	15	20	48	15	23	26
16	1	9	16	12	23	16	20	59	16	23	24
17	1	33	17	12	46	17	21	11	17	23	22
18	1	56	18	13	16	18	21	22	18	23	20
19	2	20	19	13	25	19	21	33	19	23	17
20	2	42	20	13	45	20	21	43	20	23	13
21	3	5	21	14	5	21	21	53	21	23	10
22	3	29	22	14	23	22	22	0	22	23	5
23	3	53	23	14	44	23	22	19	23	23	0
24	4	16	24	15	13	24	22	17	24	22	54
25	4	39	25	15	22	25	22	25	25	22	49
26	5	2	26	15	40	26	22	32	26	22	43
27	5	26	27	15	59	27	22	39	27	22	36
28	5	48	28	16	17	28	22	45	28	22	28
29	6	11	29	16	35	29	22	51	29	22	20
30	6	35	30	16	52	30	22	56	30	22	12
			31	17	9				31	22	4

1
5
10
13
17
20
22
24
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28
27
26
24
22
20
17
13
10
5
0
54
49
43
36
28
20
12
4

1569. Jan. Febua. Marche. Apzill.

D. C. M.			D. C. M.			D. C. M.			D. C. M.		
1	21	56	1	14	8	1	3	51	1	8	11
2	21	45	2	13	48	2	3	28	2	8	33
3	21	36	3	13	28	3	3	4	3	8	56
4	21	26	4	13	8	4	2	40	4	9	18
5	21	14	5	12	47	5	2	16	5	9	38
6	21	3	6	12	27	6	1	51	6	9	59
7	20	53	7	11	6	7	1	30	7	10	21
8	20	40	8	11	45	8	1	6	8	10	42
9	20	25	9	11	23	9	0	44	9	11	13
10	20	12	10	11	2	10	0	18	10	11	23
11	19	59	11	10	40	11	0	6	11	11	44
12	19	46	12	10	19	12	0	32	12	12	4
13	19	32	13	9	57	13	0	58	13	12	23
14	19	18	14	9	35	14	1	18	14	12	45
15	19	4	15	9	13	15	1	40	15	13	3
16	18	48	16	8	51	16	2	5	16	13	22
17	18	33	17	8	28	17	2	28	17	13	42
18	18	18	18	8	6	18	2	51	18	14	1
19	18	2	19	7	43	19	3	15	19	14	20
20	17	45	20	7	21	20	3	38	20	14	38
21	17	29	21	6	58	21	4	1	21	14	56
22	17	11	22	6	35	22	4	24	22	15	15
23	16	54	23	6	12	23	4	47	23	15	32
24	16	37	24	5	48	24	5	11	24	15	50
25	16	20	25	5	25	25	5	33	25	16	8
26	16	2	26	5	2	26	5	55	26	16	24
27	15	44	27	4	38	27	6	19	27	16	40
28	15	24	28	4	15	28	6	42	28	16	57
29	15	6				29	7	5	29	17	14
30	14	47				30	7	27	30	17	30
1	14	27				31	7	48			

May.			June.			July.			August.		
D.	C.	M.	D.	C.	M.	D.	C.	M.	D.	C.	M.
1	17	45	1	23	2	1	22	17	1	15	36
2	18	1	2	23	6	2	22	9	2	15	18
3	18	17	3	23	10	3	22	1	3	15	0
4	18	31	4	23	13	4	21	52	4	14	41
5	18	46	5	23	17	5	21	44	5	14	24
6	19	0	6	23	20	6	21	35	6	14	6
7	19	14	7	23	22	7	21	26	7	13	47
8	19	28	8	23	24	8	21	16	8	13	28
9	19	41	9	23	26	9	21	5	9	3	8
10	19	53	10	23	27	10	20	54	10	12	48
11	20	5	11	23	28	11	20	44	11	12	29
12	20	17	12	23	28	12	20	32	12	12	9
13	20	30	13	23	28	13	20	21	13	11	49
14	20	41	14	23	27	14	20	8	14	11	29
15	20	52	15	23	26	15	19	55	15	11	8
16	21	3	16	23	24	16	19	43	16	10	47
17	21	13	17	23	22	17	19	29	17	10	26
18	21	23	18	23	20	18	19	16	18	10	4
19	21	33	19	23	17	19	19	2	19	9	43
20	21	42	20	23	13	20	18	48	20	9	22
21	21	51	21	23	10	21	18	34	21	9	0
22	22	0	22	23	7	22	18	19	22	8	37
23	22	9	23	23	4	23	18	4	23	8	15
24	22	17	24	22	59	24	17	48	24	7	58
25	22	23	25	22	56	25	17	33	25	7	35
26	22	31	26	22	50	26	17	16	26	7	13
27	22	39	27	22	45	27	16	59	27	6	50
28	22	44	28	22	40	28	16	45	28	6	27
29	22	49	29	22	32	29	16	28	29	6	4
30	22	55	30	22	25	30	16	12	30	5	40
31	22	59				31	15	54	31	5	17

Septemb. October. Nouemb. Decemb.

D. M. J. D. M. J. D. M. J. D. M. J.

1	4	55	1	6	45	1	17	19	1	23	1
2	4	32	2	7	8	2	17	36	2	23	5
3	4	19	3	7	31	3	17	52	3	23	10
4	3	46	4	7	53	4	18	8	4	23	13
5	3	23	5	8	16	5	18	24	5	23	17
6	3	0	6	8	38	6	18	39	6	23	20
7	2	36	7	9	0	7	18	54	7	23	22
8	2	13	8	9	23	8	19	9	8	23	24
9	1	50	9	9	45	9	19	23	9	23	26
10	1	27	10	10	7	10	19	37	10	23	27
11	1	3	11	10	29	11	19	52	11	23	28
12	0	43	12	10	50	12	20	5	12	23	28
13	0	17	13	11	12	13	20	13	13	23	28
14	0	8	14	11	33	14	20	31	14	23	27
15	0	34	15	11	54	15	20	43	15	23	26
16	0	59	16	12	15	16	20	55	16	23	24
17	1	20	17	12	34	17	21	6	17	23	22
18	1	43	18	12	56	18	21	17	18	23	20
19	2	6	19	13	16	19	21	27	19	23	17
20	2	29	20	13	36	20	21	39	20	23	13
21	2	53	21	13	56	21	21	49	21	23	10
22	3	16	22	14	16	22	21	58	22	23	5
23	3	40	23	14	36	23	22	7	23	23	0
24	4	3	24	14	55	24	22	16	24	22	55
25	4	27	25	15	14	25	22	22	25	22	50
26	4	50	26	15	32	26	22	29	26	22	43
27	5	13	27	15	51	27	22	36	27	22	34
28	5	36	28	16	10	28	22	43	28	22	27
29	5	59	29	16	28	29	22	49	29	22	19
30	6	23	30	16	45	30	22	55	30	22	11
31			31	17	2				31	22	3

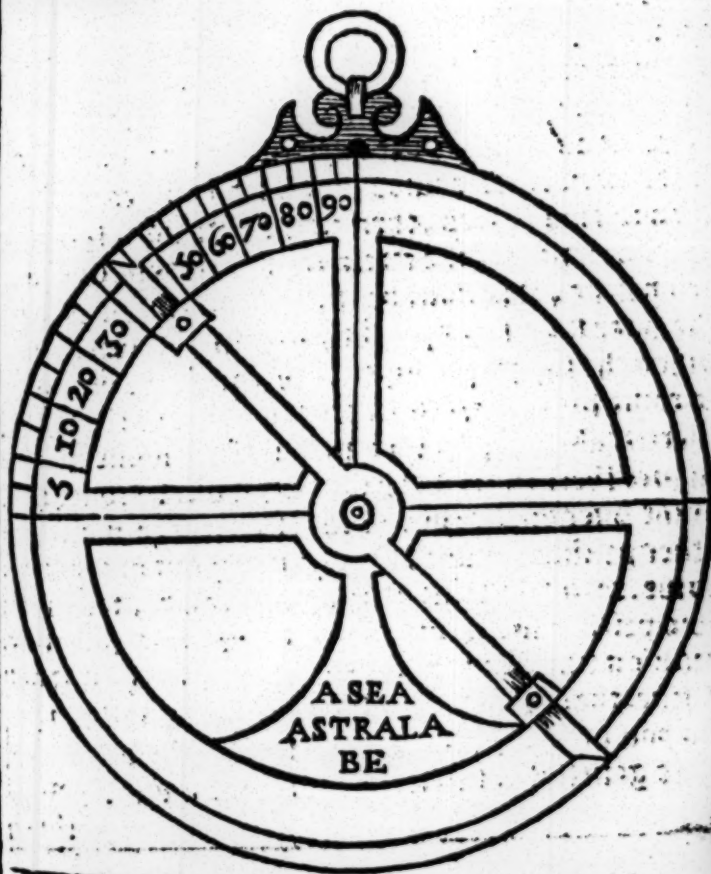
Ch. vii. Rule sheweth how to take the altitude
of the Sunne, and by the height of the Sunne to
knowe the Equinoctiall, to knowe the eleuation
of the pole artticke, and howe you shall behaue
your selfe with the Astralabe, with an example of
Graves ende, and also howe to get the true Me-
ridian, and also of the northwardinge or north
weasting of the Compas, necessary for
Navigation, or otherwysse called the
variation of the Compas,

Nowe in this table you must consider that the
xi. date of Marche, the Sunne is Equinoctiall,
entring then the first point of Aries, called the E-
quinoctiall of Spring time, then hauing no decli-
nation, then the. x. date of Aprill the Sunne en-
tretch into the first minute of Taurus, the hauing
Declination to the northwardes. xi. degrees. 30.
minutes, then the. xii. date of May, the Sunne en-
tretch the first point of Gemini, hauing then decli-
nation. 20. degrees. 12. minut. the. 12. date of June,
the Sunne entretch into Cancer, then the Sunne
maketh his greatest prograce to the northwardes,
hauing. 23. degrees. 28. minutes of declination now
in this our time. But some doe affirme to be. 23.
degrees and a halfe, but there lacketh two min.
Then the. 14. date of July, the Sunne entretch into
Leo, coming downwardes to the equinoctiall, ha-
uing. 20. degrees. 12. minutes. The. 14. date of Au-
gust, the Sunne entretch into virgo, the declinatio
11. degrees. 30. minutes. Then the. 14. of Septem-
ber, the Sunne entretch into Libra, then being E-
quinoctiall,

Equinoctiall hauing no declination called the equi-
noctiall of Autumne or harvest, then beginninge
her south declination: then the. 14. of October the
Sunne entreteth into Scorpio, the declination. 11. de-
grees. 30. minutes. Then the. 12. of November, the
Sunne entreteth into Sagittarius, the declination
20. degrees. 12. minutes. Then the. 12. daie of De-
cember, the Sunne entreteth the first minute of
Capricorne, then maketh the Sunne her greatest
prograce to the southwardes and his declination,
23. degrees. 28. minutes, and then retourneth to the
Equinoctiall againe. Then the. 11. of January the
Sunne entreteth into Aquarius, and the declination
20. degrees. 12. minutes. Then the. 10. daie of Fe-
bruary, the Sunne entreteth into the first minute of
Pisces, and the declination. 11. degrees. 30. minut.
Then the. 11. daie of March, the Sunne returneth to
the self same place that it did depart from before.
Wherefore the Egyptians did paint the yeare like
to an Ader lightning her taile, hauing not the vse
of letters, they made a ringe and named it Annulus
as it weare annus, that is a yeare, because a ring
doth turne round in it self as doth the yeare. Now
you hauing your Astralabe, if you doe require to
know how many degrees the pole aricch is above
your horizon, take your Astralabe and hang it
upon one of your fingers, and lift vp or put downe
the atbladaine or rule with þ sightes till þ beames
of the Sunne doth pearse both the sightes of the
rule or atbeladape, the Sunne beames geuing the
dowebrough both the sightes, then looke in the
table what declination the sunne hath, whether
that

that the declination be towardes the south of the
equinoctiall or towardes the north of it, then looke
vpon your astralabe what altitude the Sunne hath
vpon the meridian vpon that daye of the moneth
in your table, then if that it hath north declination
subtract, or pull away your declination, if south de-
clination, adde or put to your declination to the al-
titude of height of the Sunne, then that doth shew
you the true equinoctiall: then when you haue the
true height of the equinoctiall, looke how many de-
grees that cometh vnto, subtract or pull that sum
out of. 90. degrees, which degrees & minutes, then
that doth remaine shalbe the height of the pole a-
boue your horizon. For this you must consider, that
from the zeneth or pick over the crowne of your
head to be. 90. degrees downe to the horizon, then
looke what height the equinoctiall is from the ho-
rizon, so much is the zeneth from the pole, the must
it nedes be said that that is the altitude of the pole
to be with the distaunce of the zeneth downe to the
equinoctiall. As for an exāple, this at Grauesende
the ycare. 1566. I take the Sunne vpon the me-
ridian the. 10. daie of Aprill, & founde the altitude
of the Sunne listed aboue the horizon. 49. degrees
49. minutes, then I toke the Sunne the next daie
and founde the Sunne vpon the meridian. 50. de-
grees. 9. min. so I found the declination of the sunne
more the. 11. daie then it was the. 10. daie by. 11. mi.
which signifieth to me that the Sunne entred into
the first min. of Taurus, at one of the clocke after
midnight. The. 11. daie of Aprill, the sunne hauing
north declination of the equinoctiall, and the de-
clination. 11. degrees. 40. mi. Vpon the. 11. daie of

the moneth, then I pulled y declinatio. 11. degrees
 40. mi. out of. 50. degrees. 9. mi. the remainer was
 38. degrees. 29. mi. The altitude or height of the e-
 quinoctiall aboute the horizon: nowe I doe take or
 subtract. 38. degrees. 29. mi. out of. 90. degrees; the
 remainer is the height of y pole, being. 51. degrees
 31. mi. So in like case it is from the zeneth to the
 pole. 38. degrees. 29. min. & from the pole downe to
 the horizon. 51. degrees. 31. mi. as by the example of
 this figure.



Now it is conuenient to know the true meridian
or south, whiche you must doe either with a
good compas or with a perfect diall or neabel, and
if you be on the land, this you may doe by a peece
of tymer that standeth fast, or any other thing that
standeth fast. First take a paire of compasses, then
make a circle with the compasses, then in the mid-
dell where that the foote of the compas did stande,
set a wyer by right as circumspectly as you can,
then you may doe this, looke in the morning so that
it be on plaine ground, so that you may see the ho-
rizon circle without any let, then in the Sunne ris-
ing you must marke the shadow of the wyer, and
there set a prick, then at the setting of the sunne
there set an other prick euen at the circumference
of the circle, then deuise that with your compasses
euen in two peaces, then strike a straight lyne from
wyer or center of the circle to the middell or deu-
ided prick, that shall be the true meridian, or els
the wyer standing by right, first in the forenoone
when the top of the wyer both touche or be ready
to come into the circumference or edge of the circle
there make a prick, then in the after noone in like
manner there in the very coming out or touching
of the wyer of the edge of the circle, there make an
other prick, euen with the coming out of the sha-
dowe, then as circumspectly as you can deuise these
two prickes in the middell, then in like manner
drawe a line from the center or wyer to the middell
pricke, that shadowe shall be your true meridian, or
els you may doe this, looke and watche when the
wyer getteth the shortest shadow there make a prick,
then

then drawe a lyne rō that p̄tick to the wyer, that shadowe in lyke maner that shalbe the true meridian. This haue I said, to the ende that sometime in sundrie places that the compas doth varie, and specially in the sailing of long viages runnings east or west, called the northeasting or northwasting of the compas, therefore I would not trespasse them to meddle with the mending of their compas, or wetting of the side of the needell, to the ende to make it to stande betwix north, but circumspectly to alwaye the altering of the compas, and what quantitie it doth alter, as you may doe very well by daye by the altitude of the Sunne, and by night by the starres of the north or starres of the south, and then let your compas alone, although that it doth varie twoo or thre pointes, you may make accompt according to the variation as this I am in the northwast point, standeth betwix north, and my course is to goe betwix west, then I will occupie the south west point for the west point, and this by obseruation and tryng of my compas, I care not what point standeth betwix north for it is all one, so that you consider what point standeth North.

The eight Rule is of the north starre, and howe he should be taken vpon any of the viii. principall wyndes or pointes of the compas, with obseruation of the balastella or cross staffe.

Nowe further it is to be noted that sea men vse the north starre that standeth vpon the type of the

the tale of *Ursa minor*, the little beare, but I am
of the opinion that his distance is further from
the pole then they make a counte of, so they saie
that he is but three degrees and a halfe from the
pole: but I suppose that he is. 4. degrees from the
pole, and goeth round about nere. 24. degrees of
the great circle or equinoctiall circle, but because
I will not so muche contende with them so that
they haue so long time obserued the custome of. iii.
degrees and a halfe. I will shewe you my opinion
of the starre. The northstarre is in the longitude
of Aries, so that you doe reken him from the poles
of the world and of declination aboue the equino-
ctiall. 86. degrees, so that he is. 4. degrees from the
pole, therefore I would wishe those that haue ex-
perience, to take the starre at the highest & at the low-
est with a pzetious instrument, and then put that
nombze into two equall partes, and then you shall
see what distance that the starre is from the pole,
yet because that it hath bene of longe custome to a
count by. iii. degrees and a halfe. I will declare
the taking of y^e starre by the. 8. principal windes
or pointes of the compas, and your markes that
you shall haue shall be the twoo starres that stand
vpon the soleshoulder of the great beare, called of
the Mariners the pointers by causes that they doe
alwayes pointe to the north starre, and of some
men they be called two wheles of Charles wayne
but I would haue pointed thee to Guard starres,
but I coulde not be suffered, and this you must co-
sider because that it is towarde the north, they
call the uppermoste part right ouer the pole starre
north

noyth, and towarde the right hande, they are
east, and towarde the left hande the west, and
right vnder the starre south, and the other foure
wyndes betwene them as foloweth. First, I saye
that the pointers in the East, the noyth starre is
halfe a degree aboue the pole the pointers in the
noyth east, the noyth starre is one degree and a
halfe vnder the pole, the pointers in the noyth, the
starre is nere at the lowest. iiii. degrees and a half
vnder the pole, the pointers in the noyth west,
the noyth starre is. iiii. degrees vnder the pole, the
pointers in the west, the noyth starre is halfe a
degree vnder the pole, the pointers in the south
west, the noyth starre is one degree and a halfe
aboue the pole, the pointers in the south right vnder
the pole, the noyth starre is thzee degrees and
a halfe aboue the pole, the pointers in the south
east, the noyth starre is thzee degrees aboue the
pole. Now there be. 4. wyndes or pointes betwene
the pointers and the Guardes, for if the pointers
be east the gardes be south east: and if the pointers
be notheast, the Guardes be east. Now some there
be that will chuse their compas or mende their co-
pas by the noyth starre, which sometime the starre
is not due noyth. For when the pointers be east
then the noyth starre standeth the thirde parte of a
point to the westwardes of the pole, and whē the
pointers be directly west, the noyth starre stan-
deth the third part of a point to the eastwardes of
the pole, but when the pointers be either aboue
the pole, or ryght vnder the pole, then the starre
standeth betwene noyth. Nowe for the takyng
of the

of the altitude of the north starre, the sea men vse
an instrument called a Balestela or a Bazeler
Jacobe being a plaine crosestaffe set out with de-
grees. Nowe the north starre will serue them that
trauell to the south wardes to any place on this
side the equinoctiall, but to them that doe occupie
to the north partes, the northstarre will not serue
by canes, that the altitude of the pole standeth so
hie, and that the crosestaffe cometh so neare to
their face that with casting their eye vp to the star
and down wardes to the horizon, and then the de-
grees be so short marked vpon the staffe that they
may sone committe erro; and neuer be espied, ther
foze I doe meane to appoint certaine starres of the
south so; the that doe occupie to the north partes,
and as so; the vse and the making of the balastela,
you shall repara to the booke of Martyn Cortes,
called the arte of Nauigation, so; I must meddle
with nothing contained in that booke.

The nyntb Rule is of saylinge vpon one quar-
ter of the compas, in howe farre sayling you doe
rayse or laie a degree, and what you
doe departe from the meridian.

Furthermoze, because some doe require to knowe
the alteration of a point, that in the running of
one point, you may rayse or laye a degree soner in
one then in an other, as in the saylinge south or
north you keepe one meridian, or rayse or laye the
pole, as this, to the north you doe rayse the pole
and laie the equinoctiall, and you go towarde the
south

howe you laye the pole, and raise the equinoctiall
but in the sayling oꝝ going east oꝝ west, you doe
not alter your pole noꝝ parrel but onely your me-
ridian, but in the sayling of any other point, you
doe alter your pole and parrel and also your meri-
dian. Wherefoze I will open vnto you in the sayling
up on one of the quarters of the cōpas, what euery
point doth raise oꝝ lase one degree, in howe farre
saylinge, and howe many myles you be departed
from the place that you did departe from, & what
you be departed from your meridian. But here is
one thing to be noted, as I suppose, in the moſte
parte of cardes, they doe allowe foꝝ euery degree
but.17. leges and a halfe, because your cardes bee
moſt comonly made in Wythebourne in Dorſting-
gale, oꝝ els in Spaine oꝝ Fraunce. But as I sup-
poſe, that we in England ſhould allowe.60. myles
to one degree, that is after three miles to one leage
of our Engliſhe leages, therfoze. 20. of our En-
gliſhe leages ſhould anſwere to one degree foꝝ.3.
of our myles will not make one of their leages,
herfoze they doe make their accompte by their
leages in their cardes, but not foꝝ ours. Wherefoze
I will ſhewe you by our Engliſhe myles, an En-
gliſhe myle containeth. 1000. paces, and euery
pace.5. foote, & euery foote.12. inches. Nowe ſome
thinke that a pace can not be .5. foote, but a pace
Geometrical is twoo reaſonable ſteppes, foꝝ it
can not be a pace till the hinder foote be removed
foꝝwardes, and thoſe twoo ſtepes ſhall containe
.5. foote, and ſo ſhall any man induce to go at plea-
ſure. Nowe to our purpoſe, foꝝ the ſayling of one
quarter

quarter of the compass that in sailing directly south
or north, you doe raise or laie the pole in. 65. miles
going in the altering of one point from the south
or north. 61. miles, and departed from the lyne of
south and north, or the meridian. 12. myles in the
altering the second point, you do raise a degree in
sailing of. 65. miles, and depart from your meridian
25. miles in the altering of the third point, you do
raise or laie one degree in the sailing of. 72. myles
and. 9. part, and you doe depart from your meridian
40. myles in the altering of the. 4. point you do raise
or laie a degree in the going of. 85. miles, & depart
from your meridian. 60. myles, now in the altering
of the. 5. point or wynde, you doe raise a degree in
sailing of. 108. myles, and depart from your meri-
dian. 90. myles in the sailing by the. 6. point, you
raise or laie one degree in. 157. myles, and depart
from your meridian lyne. 145. miles. Nowe in the
sailing by the. 7. point or wynd, you doe raise a de-
gree in going of. 308. myles, and depart from your
meridian lyne. 302. miles, and this you may consi-
der of the other. 3. quarters of the compass. And if
you doe require to knowe the raising or laying of
a degree by the legges of the cardes that is at. 17.
leages and a halfe, then reade the art of navigation,
and there shall you finde howe many degrees you
be departed from your meridia, and also from the
place that you did depart from, but that serueth
for no other place but only for vnder the Equino-
ctial, for he that maketh accompt of it in any other
place, shall be deceived. For as you goe to any of
the two poles, so be your degrees shorter and
shorter

hoyster, till that your meridians meete vnder the
twoo poles which I to treat of in the.ii. Rule.

The tenth Rule treateth of the Soundinges,
comming from any place out of the Occident
Sea for to seeke vshant, or the Lizard, and
also all alongest till you doe come to
the coaste of Flaunders.

Because it is necessary to be had in memoꝝ, be-
cause that it is a dangerous place to hit or fall
with, to enter into the ſeuie comming homewardes
out of Spaine or Portugall, or from Barbaria,
or any place from the southwardes. A shippe that
commeth from any ſuche place to ſeke the Ile of
vshant, or the Lizarde in this Route of ſoundinge
of a. 100 or. 90. ſadomes, and you ſhall finde bigge
ſoundinges and ſhalbe nie about to the ſainges, &
in the route of. 80. ſadomes, ye ſhall finde cockle
ſhelles and dentes in the ſalowe of the lead, and in
this ſounding hold on your courſe to the north. till
you chaunge ſounding, then if you be at. 60. or. 64
ſadomes, you ſhall ſpnde ſmall ſande and marber
grounde, and you ſhalbe neare the Coaſte of Wi-
ſhaunt, and if you haue tyme and daie, goe ſeek
it in the northeaſt, and you ſhall be about tenn
leages fro the Ile. If you come making your courſe
about the baſe ſrebe, you ſhall finde coarſe ſande,
read and bꝛowne, and you ſhall haue ſoundinge at
40. ſadomes, and if you be towardeſ the banke of
Willep, you ſhal haue ſoundinges at. 86. or. 90. ſadoms.

F. ii.

and

and you shall finde in the tallowe stony groundes,
and you shalbe well thotte towards the banke of
Sillep. And when you be at. 80. fadomes, you shall
fynde small blacke sande, and you shalbe well to-
wards the Lizarde. And when you be at. 60. or
64. fadomes, you shall finde whyte sande, & whyte
kotte wormes, and you shalbe verry nie to the Li-
zarde. Betwene the cape of Coznelwall and Wil-
chant, amide the channell, you shall finde. 70. fa-
domes. And neave penowse betwene Dodna and
the fourme in the channell, you shall haue. 40. or
50. fadomes. If you be thwarte of Plymouthe, or
the starte, you shall fynde streamy grounde, and
denes in the tallowe, and soundinges of. 41. or. 42.
fadomes, at the comming from pozte lande, you
shall haue. 35. fadomes and small shingelles. And
when you be nie to pozte lande. 30. fadomes, and
stones lyke beanes, and this soundinge will laste
till saint Aldam: and in the saide soundinges you
shall finde whyte stons lyke broken aules, and o-
ther that be bigger, and then you shalbe thwarte
of Saint Aldame, or of the Ile of Wight, two or
thre leages from the Ile of Wight, and you shall
finde. 25. fadomes, with denes and cleses in the
tallowe like small thyrdes. A two or thre leages
from the caskettes, you shall finde. 40. fadomes, &
hygge stons rugged and blacke. Betwene the Ile
of Wight and the Hagge, the drapest is but. 35. or
40. fadomes. Betwene the Ile of Wight & Lantri-
gate, the depest is but. 25. or. 30. fadoms betwene Be-
thy and the Ile of Wight, a leage fro the lande, you
shall fynde. 38. fadomes, and poppelles as bigge as
beanes.

beanes. Betwene Falerly & the water of Bolland
in the deapest but. 25. fadomes. Betwene Faldrayne
and Bolland, is a banke that is called Kyppe
Kappe, and lyeth in the midde waye betwene Irl
cardie and Englands, and harde abozde by it, is
26. 02. 27. fadomes. In the straight of Callis, is. 30.
fadomes. In the rode of Callis, is. 16. fadomes.
And alongest the coaste of Flaunders is but, 20.
fadomes the deapest. This muche haue I sayde
foz the entraunce of the sene to come to the ryuer
of Thames, and as foz daungers and suche lyke, I
doe referre that to theim that haue moze conning
and experiance then I haue, And in the entraunce
in the midde waye betwene Albante and the Li-
garoe, the pole aricke is elevated. 50. degrees and
a halfe, and the Equinoctiall is lifted aboue the
Horizon. 39. degrees and a halfe.

The eleuenth Rule, treateth of the Longi-
tude, although that it be very tedious.

Nowe some there be that be very inquisitiue
to haue a waye to gette the Longitude, but
that is to tedious, foz this they must consider, that
the whole frame of the firmament is caried rounde
from the east into the west, in. 24. houres, so there
remayneth no light noz marke, but goeth rounde,
saying only the two poles of the world, and these
two standeth faste. But as I saide before in the
11. Rule, he that goeth south o2 north, doth rayse
o2 laye the pole, and in the like case of the Equino-
ctiall altering his parall, causing the lightes of the

firmament to alter the time of their shining or by-
ding aboue our horizon, and he that goeth directly
east or west, doth neither rayse nor delay the pole
ent still the lightes of the firmament, doth make
one manner of arch, accordinge to their latitude
or declination, but the going east or west, doth
alter the meridian, causinge the Planets to haue
their aspectes at an other houre or time, altering
the tyme of the chaunges of the moone, and also
the tyme of the Eclipses, whiche is necessary
for all traualers by Sea or by Lande. There-
fore I thought it needefull to bee spoken of. For
as countries haue Latitude from the poles, so
in like manner they haue appointed longitude.
But now you may get the Latitude with instru-
mentes, but the Longitude you must bringe from
an other place, whiche you can not doe but with a
Globe, or els a Mappe or Carde, & then you must
measure from the meridian landes of the Canary
Ilandes, or otherwysse called the fortunat Ilands;
and in our Latitude of London euery. 555. myles,
whiche containeth. 15. degrees, will aunswere to
one houre of tyme, and vnder the Equinoctial. 900
myles to sixe degrees, the degrees be as longe
as the degrees of Latitude, but towarde the pole
fewer and fewer, till they come to nothing, vnder
the two poles. And now. 37. myles with vs at
London, will aunswere to one degree to our Lat-
itude at. 51. or. 52. degrees of eleuation of the pole.
But the cause why the Longitude was fetcht fro
the Canary Ilandes, I knowe not: Yet as I sup-
pose, because that it was the the westermost place
then

then knowen. For Ptolemy was the first that
ordayned that rule. Nowe furthermoze, because
that you shall knowe the better, I wyll ordeyne our
certayne of the chiefest places about this Realme
of Englande, both their Longitude and Latitude,
by whiche you shall knowe what manner of arche-
the Sunne with the other lightes doth make, and
also by the Longitude to knowe at what tyme the
Moone with any of the Planetes doth make any
aspecte, & also the Eclipses of the Sunne or moone,
with the chaunge, quarters, and full moone, by a
true and exact Ephemerides throught all Englad,
to knowe the very true houre and minute of the
tyme of the deametre, considering for what Lon-
gitude or place your Almanack was made for, &
nowe to gette the Longitude, you may at the time
of the Eclipse of the Moone, for the Eclipses of
Moone be generall, so that she is aboue your Hori-
zon in any place vpon the superficial partes of the
earth or sea, considering as I saide befoze, by your
Almanack, at what tyme the Eclipse should hap-
pen the very houre & minute, knowinge the place
that your Almanack was made for, and then ac-
cording to this rule with a pzeise instrument the
alteration of the time and houre and minute of the
Eclipse. And furthermoze, you may knowe your
longitude by the Ephemerides by the conjunction
of the moone with the other fixed starres, and by
the distaunce betwene them with a pzeise instru-
ment, considering the moones course with degrees
and minutes, but I am of opinion that it is to ter-
rible for to be done vpon the Sea, but it may be

none vpon the land, for the Sea doth alwayes lift
the shippe vp and down, and the least chop of a sea
causeth a man to committe errour. Therfore lette
no Sea men trouble them selfe with this rule, but
accozding to their accustomed manner, lette them
keepe a perfect account and reckening of the way
of his shippe, whether the ship goeth to lewardes
or maketh her way good, cōsidering what thinges
be against him or with him : as tydes, cozrantes,
wyndes, or suche like. As for the rule of Longitude
it foloweth in the next Rule.

**The twelfth Rule sheweth howe many myles
will answere to one degree of Longitude in
euery scuerall Latitude betwene the
Equinotiall and any of the
two Poles.**

NOW this Rule shall teache you to know how
many myles will answere to one degree, for
euery scuerall Latitude to any of the two poles,
either the articke or antarticke. And first vnder the
equinotiall, two poles being euē with the bozle
pon. 60. myles to one degree as I saide in the. xi.
Rule. And now we shall folowe the rest where the
poles be raised. 21. degrees. 56. myles to one degree
of Longitude, Nowe the poles being raised. 29. de-
grees. 52. myles one degree, then at. 36. degrees. 48
myles to one degree, the at. 42. degrees. 44. myles
to one degree longitude, then at. 53. degrees. 36.
myles to one degree longitude. The pole raised
57. degrees. 32. myles to one degree. The pole ray-
sed. 62.

ed. 62. degrees. 28. myles to one degree. The pole
rayled. 66. degrees. 24. myles to one degree. The
pole rayled. 70. degrees. 20. myles to one degree.
The pole rayled. 74. degrees. 16. myles to one de-
gree. The pole rayled. 78. degrees. 12. miles to one
degree. The poles rayled. 82. degrees. 8. myles to
one degree. The poles rayled. 86. degrees. 4. miles
to one degree. The poles being rayled to the hy-
ghest at. 90. degrees, being then your zenith, there
all the meridians mete. Nowe you must consider
that euery houre of tyme in the chaunging of the
moone of the Eclipses, you must allowe. 15. de-
grees, euery degree in myles as you do see in your
Latitude of the countrey, as this, those places that
be to the westwardes of your towne or place, or
countrey, by. 15. degrees, the moone shall chaunge
rather with them then with you by one houre, be-
cause that they shall touche your meridian befoze
theirs by one houre. And if the towne or place be
to the east wardes of you by. 15. degrees, then shall
the moone chaunge rather with you then with
them by one houre, because the moone shall touche
their meridian befoze yours by one houre: As for
an example thus, with vs at London, the seconde
daye of October. 1567. the moone shall chaunge at
11. of the clocke at noone. 5. minutes, nowe to the
westwardes as farre as Lisbonne in Portugal.
the moone shall chaunge that same daye at. 11. of
the clocke. 8. minutes, the Longitude beinge there
from the Canary Ilandes. 5. degrees. 36. minutes,
nowe to the east wardes that same daye at Rome
the moone shall chaunge at. 1. of the clocke. 12. mi.

because

because that they haue longitude. 36. degrees. 40. minutes from the Canary Ilandes, and then by this account. 7. degrees and a halfe, will answer to halfe an houre, and then. 3. degrees and a quarter, will make a quarter of an houre, and then. 9. miles and a quarter, will make one min. of tyme with vs at London in our latitude. So by this rule you may knowe at what tyme and minute the Eclipse or chauges of the moone doth happen, knowing for what place your Almanack was made, for as commonly we here in Englande doe make them for the citie of London. Nowe the next Rule shall treat of the longitude and latitude.

The thirteenth Rule, treateth of the Longitude and the Latitude of certaine of the most notable townes in England, and also how long the moone doth chaunge at the one towne before the other, and also the diuersitie of the longest daie in sommer, from Southampton to the nethermost place in Scotland.

Now in this rule shall solve the Longitude and Latitude of the most parte, of the principall places in Englande, the southermost place in Englande is the Lizard in Cornewall, the Longitude. 15. degrees. 5. minutes, the Latitude. 50. degrees. 45. minutes. Saint Michaels mount. 14. degrees. 20. minutes Latitude. 51. degrees. 6. min. Falmouth Longitude. 15. degrees. 12. min. Latitude

ude. 51. degrees. 0. minutes. Plimouth Longitude
19. degrees. 7. minutes Latitude. 51. degrees. 1. mi.
Southampton Longitude. 18. degrees. 52. Latit-
ude. 51. degrees. 2. minutes. Portsmouth Lon-
gitude. 19. degrees. 7. minutes Latitude. 51. degrees
3. minutes. Wye Longitude. 20. degrees. 22. min.
Latitude. 51. degrees. 5. minutes. Dover Longitude
21. degrees. 40. minutes Latitude. 51. degrees. 26
minutes. Canterbury Longitude. 21. degrees. 25.
minutes, Latitude. 51. degrees. 28. minutes. Sand-
wiche Longitude. 21. degrees. 38. minutes, Latit-
ude. 51. degrees. 29. minutes. London longitude. 19
degrees. 54. minutes, Latitude. 51. degrees. 32. mi.
Grauesende Longitude. 20. degrees 14. minutes,
Latitude. 51. degrees. 31. minutes. Widdow Longitude
17. degrees. 8. minutes, Latitude. 51. degrees
42. minutes. Haruarde Longitude 17. degrees. 0.
minutes, Latitude. 52. degrees 2. minutes. Saint
Dawies head Longitude. 15. degrees. 5. minutes.
Latitude. 52. degrees. 15. minutes. Oxford Longi-
tude. 18 degrees. 59. minutes, Latitude. 51. degrees
50. minutes. Cambridge Longitude. 20. degrees,
6. minutes, Latitude. 52. degrees. 0. minutes. Por-
tliche Longitude. 21. degrees. 20. minutes, Latit-
ude. 52. degrees. 10. minutes. Lincolne Longitude
20. degrees. 28. minutes, Latitude. 53. degrees. 6.
minutes. Warrspole Longitude. 16. degrees. 40.
minutes. Latitude. 53. degrees. 6. minutes. Warr-
chester Longitude. 17. degrees. 29. minutes, Latit-
ude. 53. degrees. 34. minutes. Hull Longitude. 20
degrees. 54. minutes, Latitude. 53. degrees. 57. min.
Pozke Longitude. 20. degrees. 0. minutes, Latit-
ude.

ube. 54. degrees. 1. minute. Lockermouth Longitude. 17. degrees. 0. minutes, Latitude. 55. degrees. 8. minutes. Carlisle Longitude. 17. degrees. 48. minutes, Latitude. 55. degrees. 2. minutes. Newcastle Longitude. 20. degrees. 31 minutes, Latitude. 55. degrees. 0. minutes. Barwike Longitude. 20. degrees. 48. minutes, Latitude. 56. degrees. 13 minutes. Edenbrowe in Scotlande Longitude. 19. degrees. 50. minutes, Latitude. 57. degrees. 0. minutes. Nowe by the longitude and the latitude, you may knowe the lengthe of the daye both in summer and also in wynter, and also the perfect hour and minute of the chauges of the moone, and howe long the moone doth chaunge at one towne as for an other thzough the whole Realme of England. And nowe in order as I haue begonne befoze, I will shewe you the distaunce of tyme, and first at Saint michaels mount, the moone chaungeth rather then at London by. 25. minutes.

Rather at Falmouth then at London by. 20. minutes, at Plymouth rather then at London by. 18. minutes, at Southhampton rather then at London by. 6. minutes, at Portesmouth rather then at London, by. 4. minutes, at Rye later then at London by one minute and. $\frac{1}{2}$. at Dover later then at London by. 6. minutes and moze, at Caunterbury later then at london by. 5. minutes, at Sandwich later then at london by. 6. minutes, Crauesende later then at london, by one minute & a half, Wythowe rather then at london, by. 11. minutes, Haruard rather then at london by. 12. minutes, & Davis head rather then at london by. 19. minutes.

Erfoze

Oxford rather then at london by. 4. minut. Can-
bridge later then at london, by. $\frac{2}{3}$. partes of a mi-
nute, Lincolne later then at london, by. 1. minut.
Wells rather then at london, by. 16. minutes
Westchester rather then at london, by. 10. minutes
Oxford later then at london, by. 4. minutes, Exeter
later then at london, by. $\frac{1}{4}$. of a minute, Coker-
mouth rather then at london, by. 12. minutes, Car-
lelle rather then at london, by. 9. minutes, New-
castell later then at london, by. 2. minutes, Bar-
wicke later then at london, by. 3. minutes & more.
Nowe in like maner I thinke that it is necessary
to be spoken of, the difference of the longest day in
sommer, in every scottish latitude in the whole
Realme of Englande, from the southermost parte
called the Lizard, to the northermoste parte in
Scotland, and this is called the day fro the sunne
rising or appearing above our horizon till the go-
ing downe of the sunne in our horizon, and first
at Southhampton, the longest day is. 16. houres
long. 26. minutes the shortest. 7. houres. 34. minu.
at london. 15. houres. 30. minutes longest 7. houres
30. minutes shortest. At Lincolne. 16. houres. 45.
minutes longest. 7. houres. 1. minutes shortest.
Exeter the longest. 17. houres, the shortest. 7. houres.
Newcastell the longest. 17. houres. 12. minutes,
the shortest. 6. houres. 48. minutes. Barwicke the
longest. 17. houres. 30. min. the shortest. 6. houres
30. min. Edenborough in Scotland, the longest day
in sommer. 17. houres. 45. minutes, the shortest day
6. houres. 15. minu. Now Catnesse point being the
norther

northermost partie in all Scotland, the pole being
raised to. 62. degrees, there the longest day is. 19.
houres. 30. mi. the shortest day. 4. houres. 30. min.
Now this you doe consider, looke what the lon-
gest day doth containe, looke what that lacketh of
24. houres, that is the shortest wynter daye.

The fourteenth Rule, is of the longitude and de-
clination of. 12. notable fixed starres for navigatio,
with tabels of their rising, and at what point of
your compass that they doe both rise & set, and also
tabels for every moneth of the year, declaring at
what houre and minute that they be south, run-
ning from the first daie of the moneth to the
15. and from the. 15. to the last daye,
and will continue this. 100.
yeares without much
error.

This Rule containeth the Longitude and decli-
nation of. 12. notable fixed starres for naviga-
tion for them that trauell to the northwardes or
to the southwardes, as farre as the Canary Ilands.
The first rowe of this Table is the names of the
Starres, the seconde the signes that they be in, the
third and fourth rowe, the degrees and minutes
in the signes: The fifth and sixt, the degrees & min.
of declination: The seventh sheweth towardes
what partes they doe decline, & the letter, N. sig-
nifieth towardes the meridional or south, And the
letter, S. signifieth the partes Septentrionall or
north.

The

Names of the Starres.	Sig- nes.	Degrees of figures.			Minutes of figures.			Degrees of Declination.			Minutes of Declination.			Towardes what parties they doe Decline	The big- nes of the starres.
		Deg.	Min.	Sec.	Deg.	Min.	Sec.	Deg.	Min.	Sec.	Deg.	Min.	Sec.		
The whales belly	Uries.	16	2	12	20			11.						11.	A star of 2. bignes.
The Bullies eye.	Sem.	3	42	15	24			3.						3.	a great starre
Onions left foote.	Sem.	10	12	9	14			11.						11.	a great starre
The first in Oriōs gyrdell.	Sem.	16	22	1	19			11.						11.	The 2. big.
The great dogge.	Cácer	8	40	15	30			11.						11.	a great starre
The litle dogge.	Cácer	20	10	6	4			3.						3.	a great starre
The brightest in Hydra.	Leo.	21	2	+	47			11.						11.	The 2. big.
The Lions harte.	Leo.	23	32	14	1			3.						3.	a great starre
The Lions tayle.	Virgo	15	32	16	46			3.						3.	a great starre
Virgins spycke.	Libra	17	42	4	54			11.						11.	a great starre
The scorpiōs hart	Sagi.	3	42	24	27			11.						11.	The 2. big.
The Eagle.	Lapri.	24	51	7	28			3.						3.	The 2. big.

This table is necessary for all men to knowe,
 doing as before is laid, as you do by the Sunnes
 declination, so doe by these starres, as if north de-
 clination pull the same a waie, if south declination
 put to the degrees and minutes of declination, and
 that will shewe you the Equinoctial, and so by the
 altitude of the equinoctiall to knowe the elevation
 of the pole euen as you doe by the Sunne in all
 pointes. And the 8. rowe sheweth you nothing but
 the bignes of the starres. And now we shall followe
 certaine tables, for to knowe the time of their ris-
 ing, and at what pointe and wyndoe that any of
 these

These Starres both ryle and sette in our horizon,
and also at what houre and minute that they do
touche our meridian oʒ south, foʒ this. x. yeaʒes
without muche erroʒ.

The whales belly ryle moze then east and by
south, and settes moze then west and by south,
and shyneth. ix. houres. 45. minutes. The Bulles
eye ryle neare the east noʒtheast, and settes neare
the west noʒthwest, and shyneth. 14. houres. 52.
minutes. Dions lette soote ryle east and to the
noʒthwardes, & settes west & to þ noʒthwardes,
and shyneth. xii. houres. 15. minutes. The firste in
Dions girdell, ryle east and to the southwardes,
and settes west and to the southwardes, and shyneth.
xi. houres. 52. minutes. The great dogge ryle
east southeast, and settes west south west, and
shyneth. ix. houres. xlii. minutes. The lesser dogge
ryleth east and to the noʒthwardes, and settes
west and to the noʒthwardes, and shyneth. xii.
houres. 18. minutes. The brightest in Hydra, riseth
east and to the southwardes, & settes west & to the
southwardes, & shyneth. 11. houres. 46. mi. The Lions
hart riseth neare east noʒth east, & settes neare west
noʒth west, & shyneth. 14. houres. 30. mi. The Lyons
raile, riseth east noʒtheast, and settes west noʒth
west, & shyneth. 15. houres. The virgins spicke ri-
seth east & to the southwardes, & settes west & to the
southwardes, & shyneth. 11. houres. 46. minu. The
Scoz piones harte riseth south east, & settes south
west, and shyneth. 6. houres. The Eagle riseth
east and to the noʒthwardes, and settes west & to
the noʒthwardes, & shyneth. 12. houres. 26. min.

The

The whales belly	1	5	54	C	1	4	54	C
The Bulles etc.	2	8	52	C	2	7	52	C
Drions left soote.	3	9	23	C	3	8	23	C
The first in Dylōs girdell.	4	9	50	C	4	8	50	C
The gaeat dogge.	5	11	4	C	5	10	4	C
The lesser dogge.	6	12	0	0	6	11	0	C
The brightest in Pioda.	7	2	4	Ⓜ	7	1	4	Ⓜ
The Lions harte.	8	2	13	Ⓜ	8	1	13	Ⓜ
The Lions taylor.	9	3	42	Ⓜ	9	2	42	Ⓜ
The virgins spike	10	5	51	Ⓜ	10	4	51	Ⓜ
The scoptions hart	11	8	54	ⓂD	11	7	54	ⓂD
The Eagle.	12	12	19	AD	12	11	19	ⓂD

	January frō the first day to p. 15.				January frō p. 15. day to the last.			
February frō the first day to the. 15.	February frō p. 15. day to the last.				Marche frō the first day to the. 15			

1	3	54	24	1	2	54	DA	1	1	54	24
2	6	52	C	2	5	52	DA	2	4	52	DA
3	7	23	C	3	6	23	C	3	5	23	DA
4	7	50	C	4	6	50	C	4	5	50	DA
5	9	4	C	5	8	4	C	5	7	4	C
6	10	0	C	6	9	0	C	6	8	0	C
7	12	4	Ⓜ	7	11	4	C	7	10	4	C
8	12	13	Ⓜ	8	11	13	C	8	10	13	C
9	1	42	Ⓜ	9	12	42	Ⓜ	9	11	42	C
10	3	51	Ⓜ	10	2	51	Ⓜ	10	1	51	Ⓜ
11	6	54	Ⓜ	11	5	54	Ⓜ	11	4	54	Ⓜ
12	10	19	ⓂD	12	9	19	ⓂD	12	8	19	ⓂD

Marche fro the 15. to the last.				April from the first day to p. 15				April fro the 15. to the last.			
1	12	54	DA	1	11	54	DA	1	10	54	DA
2	3	52	DA	2	2	52	DA	2	1	52	DA
3	4	23	DA	3	3	23	DA	3	2	23	DA
4	4	0	DA	4	3	50	DA	4	2	50	DA
5	6	4	DA	5	5	4	DA	5	4	4	DA
6	7	0	E	6	6	0	DA	6	5	0	DA
7	9	4	E	7	8	4	E	7	7	4	E
8	9	13	E	8	8	13	E	8	7	13	E
9	10	42	E	9	9	42	E	9	8	42	E
10	12	51	A	10	11	51	A	10	10	51	E
11	3	54	A	11	2	54	A	11	1	54	A
12	7	19	DA	12	6	19	DA	12	5	19	A

May fro the first to the. 15.				April fro the 15. to the last.				June fro the first to the. 15.			
1	9	54	DA	1	8	54	DA	1	7	54	DA
2	12	52	DA	2	11	52	DA	2	10	52	DA
3	1	23	DA	3	12	23	DA	3	11	23	DA
4	1	50	DA	4	12	50	DA	4	11	50	DA
5	3	4	DA	5	2	4	DA	5	1	4	DA
6	4	0	DA	6	3	0	DA	6	2	0	DA
7	6	4	DA	7	5	4	DA	7	4	4	DA
8	6	13	DA	8	5	13	DA	8	4	13	DA
9	7	42	DA	9	6	42	DA	9	5	42	DA
10	9	51	E	10	8	51	DA	10	7	51	DA
11	12	54	A	11	11	54	E	11	50	54	E
12	4	19	A	12	3	19	A	12	2	19	A

June from
the. 15. daye
to the last.

1	6	54	☾☾
2	9	52	☾☾
3	10	23	☾☾
4	10	50	☾☾
5	12	4	☾☾
6	1	0	☾☾
7	3	4	☾☾
8	3	13	☾☾
9	4	42	☾☾
10	6	51	☾☾
11	9	54	☾
12	1	19	☾

August fro
the first day
to the. 15.

1	3	54	☾
2	5	52	☾☾
3	7	23	☾☾
4	7	50	☾☾
5	9	4	☾☾
6	10	0	☾☾
7	12	4	☾☾
8	12	13	☾☾
9	1	42	☾☾
10	3	51	☾☾
11	6	54	☾☾
12	10	19	☾

July from
the first day
to the. 15.

1	5	54	☾☾
2	8	52	☾☾
3	9	23	☾☾
4	9	50	☾☾
5	11	4	☾☾
6	12	0	☾
7	2	4	☾☾
8	2	13	☾☾
9	3	42	☾☾
10	5	51	☾☾
11	8	54	☾
12	12	19	☾

August fro
the. 15. daye
to the last.

1	2	54	☾
2	5	52	☾☾
3	6	23	☾☾
4	6	50	☾☾
5	8	4	☾☾
6	9	0	☾☾
7	11	4	☾☾
8	11	13	☾☾
9	12	42	☾☾
10	2	51	☾☾
11	5	54	☾☾
12	9	19	☾

July from
the. 15. daye
to the last.

1	4	54	☾
2	7	52	☾☾
3	8	23	☾☾
4	8	50	☾☾
5	10	4	☾☾
6	11	0	☾☾
7	1	4	☾☾
8	1	13	☾☾
9	2	42	☾☾
10	4	51	☾☾
11	7	54	☾☾
12	11	19	☾

September
fro the first
day to the. 15.

1	1	54	☾
2	4	52	☾
3	5	23	☾
4	5	50	☾
5	7	4	☾☾
6	8	0	☾☾
7	10	4	☾☾
8	10	13	☾☾
9	11	42	☾☾
10	1	51	☾☾
11	4	54	☾☾
12	8	19	☾

Septeb. frō
the. 15. Day
to the last.

October frō
the first Day
to the. 15.

October frō
the. 15. Day
to the last.

1	12	54	☾
2	3	52	☾
3	4	23	☾
4	4	50	☾
5	6	4	☾
6	7	0	☾
7	9	4	☾
8	9	13	☾
9	10	42	☾
10	12	51	☾
11	3	54	☾
12	7	19	☾

1	11	54	☾
2	2	52	☾
3	3	23	☾
4	3	50	☾
5	5	4	☾
6	6	0	☾
7	3	4	☾
8	8	13	☾
9	9	42	☾
10	11	51	☾
11	2	54	☾
12	6	19	☾

1	10	54	☾
2	1	52	☾
3	2	23	☾
4	2	50	☾
5	4	4	☾
6	5	0	☾
7	7	4	☾
8	7	13	☾
9	8	42	☾
10	10	51	☾
11	1	54	☾
12	5	19	☾

November
from the. 1
to the. 15.

November
frō the. 15.
to the last.

December
from the. 1
to the. 15.

December
frō the. 15.
to the last.

1	9	54	☾
2	12	52	☾
3	1	23	☾
4	1	50	☾
5	3	4	☾
6	4	0	☾
7	6	4	☾
8	6	13	☾
9	7	42	☾
10	9	51	☾
11	12	54	☾
12	4	19	☾

1	8	54	☾
2	11	52	☾
3	12	23	☾
4	12	50	☾
5	2	4	☾
6	3	0	☾
7	5	4	☾
8	5	13	☾
9	6	42	☾
10	8	51	☾
11	11	54	☾
12	3	19	☾

1	7	54	☾
2	10	52	☾
3	11	23	☾
4	11	50	☾
5	1	4	☾
6	2	0	☾
7	4	4	☾
8	4	13	☾
9	5	42	☾
10	7	51	☾
11	10	54	☾
12	2	19	☾

1	6	54	☾
2	9	52	☾
3	10	23	☾
4	10	50	☾
5	12	4	☾
6	1	0	☾
7	3	4	☾
8	3	13	☾
9	4	42	☾
10	6	51	☾
11	9	54	☾
12	1	19	☾

N the yeare being exactly calculated their tyme
 of their being south, or touchinge your meridian,
 or as some terme it the nooneleade, seruing very
 well the sea mā to be taken with their Instrumētes
 vpon the Sea, referring it vnto the table of decli-
 nation that goeth befoze the first is the houres, the
 second the minutes, the thirde beinge the letters,
 doth shewe you whether they be south by daye or
 by night, in the euening or moꝛning, in y^e forenone
 or in after noone. And the **C.** doth signifie eue-
 ning. The letter **M.** signifieth the moꝛning. And
 the letter **DM.** signifieth day in the moꝛning. And
 the letters **DA.** signifieth daie in the after noone,
 as I saide befoze; the very houre & minute of their
 being south. Now you doe see that I haue put to
 their being south in the daie as wel as in the night
 to the intent to knowe the houre of the nighte, as
 well by their setting, as also by your compass as I
 shewed you in the second Rule. To bring your. 34.
 pointes into. 24. houres. And in like maner in the
 fifth Rule or shining, to diuide the shining into. 2.
 equall partes: And those partes beinge equally di-
 uided with the houres and minutes, the that time
 befoze their being south, put to that halfe that shi-
 neth, that sheweth the iust ryling of those starres:
 then the other tyme of their shining after their be-
 ing south, sheweth the setting, as I declared in the
 rule of shining of the moone. Nowe you see that
 the table runneth from the first daie of every mo-
 nth to the. 15. & from the. 15. to the last day. Nowe
 you must consider, that if you will knowe the ex-

exact time betwixt the first day and the last day,
 or betwixt the .xv. daie and the last: doe this, looke
 how many daies of the moneth is past, either frō
 the first daie or .xv. daie, pull .4. minutes from that
 number, so: so many daies as is past so: every day
 that shall shewe you the true time of their being
 south, and then doing as aforesaid so: their rising
 and setting. Now this I make an ende so: bene-
 dit, or els I would haue written the circles of the
 Sphere, with the orbes of the lightes of the fir-
 mament, and the courses of the seven lightes, or
 planetes in the zodiack, but that would make to
 great a volume. And furthermore, I am not wor-
 thy to make any rehearsal of it. For there be a nū-
 ber of moste prudent and famous Autours, that
 haue written both in the Grecke tongue, and also
 in the Latine tongue, that be of great antiquitie.
 And also of late wryters most famous mē, in these
 our daies, as Iohannes de Sacro Bosco, and Vo-
 rētius, Iewarētius, and also in the English tong
 Doctor Recorde, with a great nūber moze, which
 I passe ouer, notably seene in the Mathematicall
 sciences.

**The fiftenth Rule, sheweth howe to sayle
 by the Globe.**

Nowe to sayle by the Globe, it is convenient
 to be spoken of, so: that generally the moste
 part of the sea men make their accompt as though
 that the earth were a platte forme, so: they do not
 consider that the earth is a Globe, and that the Me-
 ridians

ridians both growe narrower & narrower to
the two poles, for it is impossible to drawe φ face
of the earth and the sea true vpon a platte forme.
for if that you will describe the land true, then shall
not the Sea be true. For as you doe go toward
the north partes, your meridians growe together,
so shall not your lynes or pointes be accordinge to
the arte of Hydriographie, for the sea shall be broad-
er to the north partes then that it is. Nowe if you
should describe the Sea true with lynes, courses,
distances, hauens & daungers, then should your land
be broader to φ north partes then it is, as for exaple.
This England & Scotland being both one φ land in
all your cartes of navigation, φ north part of Scot-
lande is drawen muche bigger then it is, for cle-
the lines of south & north, should not be according
to the trenting of the lande: for if that you bewe
it well, you shall finde the north ende of Scotlande
muche moze in distance then it is, as you maye
measure it by the trounke of your carde. Therefore
for your better vnderstanding, I will shewe you
the compas of the earth vnderneath sundry par-
celles or circles, how many myles that the earth
both contayne in compasse. First vnder the Equi-
noctiall where that the earth is at the greatest co-
passe in the going directly east or west, that is by
a right line ouer the sea and lande, the two poles
being euen with your horizon, it is. 21600. myles
to come to the place that you did depart from. the
vnder the tropicke of Cancer, the north pole be-
ing rayled. 23. degrees and. 28. minutes, goinge
directly east and west. 19800. myles in compasse.

C. liii.

Then

from our article circle of London, where the
pole article is rayed. 51. degrees. 32. minutes, go-
ing directly east and west. 13320. myles in compas,
then vnderneath the pollard circle where the pole
is rayed. 66. degrees. 32. minutes. 8460. myles in
compas, so you see that the compas of the east and
west lyne coming from the equinoctiall, is muche
lesser to the northwardes the that it is to the south
wardes, therefore when that you shall haue anye
ocassion to attempt anye biage to the north partes,
it is best to sayle by a globe, soz so that you better se
the distaunces and bignes of the landes, and in like
case your lines and courses as this first, according
to the accustomed maner, kepe a prickt accompte,
and rekening the way of the shippe, by what lyne
oz point your ship hath made her waye good, then
must you resorte to your globe, and then consider
in what place and parrell you be in, as you maye
doe by the Sunne by daye, and by the Starres by
nyght, then considering in what place and parrell
you be in, set your globe to your eleuation of your
pole, then turne to the place of your zeneth, & seeke
the opposite of your zeneth in your parrell, soz then
you doe knowe that in that parrell is your east and
west lyne, then in the iust quartr of that circle to
the pole, deuide into your, 8. pointes of your com-
pas, and so on the other side, and in like case if you
come to the southwardes, then deuide your right
wyndes from your antetrike pole to your parrell
circle, and this must you doe euer, and anone soz
the oftener that you doe obserue this custome, the
better and purtier shall your course be. Now this

briefly I do make an ethe or compass by the
but as for them that doe occupie the southpart
nothing is better then their cardes, and because
that I haue declared vnto you the lengthe of cer-
taine of the parcellles, what myles the earth doth
containe in compass vnder the. Nowe will I shew
you how many myles distaunce is betwene euer
one of them, and first from the Equinoctiall to the
Tropicke of Cancer, whiche is there where that
the Sunne maketh his furthest pzoграce to the
north partes, it is. 1408. myles betwene them, the
betwene the Tropicke of Cancer and our artticle
circle of London, it is. 1684. myles: When be-
twene our artticle circle and the pollard circle,
is. 900. myles. When betwene the pollard
circle and the pole, is. 1408. myles, so that it is in
all from the Equinoctiall to either of the two
poles. 5400. myles, whiche is the fourth parte of
the compass of the whole earth.

The sixtenth Rule, declareth howe to knowe
the houre of the daye by the Compass.

Now for to make your instrumentes for the
Sea with their vles, you shall repayze to the
booke of Nauigation, made by Martine Cortis a
Spanyarde, Imprinted by maister Iugge printer
to the Queenes maiestie, whiche booke hath bene
very chargeable to him, therfore it is not for me
to medle with nothing contained in that booke, o-
els I would haue shewed you the makinge of the
Equinoctiall diall with his vse, whiche is very
pzoftable

pointe of the compass sheweth the houre of the day by
by the shadowe of the sunne in the morning and evening
neither of them know when that the moone is
of the day or night that the hath north declination
bringeth the signe of Taurus; Gemini, and Can-
cer, or Libra, because that your compass standeth
upon your horizon, therefore I will shewe you
what you shall doe, take an olde stile or carde of
compass, then pull out the brasse that the carde
hangs on, then take a wyer and put it through the
carde, that the one ende be as long as the other, &
put a litle ware about the wyer to make it stand
fast and upryght, then whē you would know what
that it is a clock, set your compass asoze you, then
take the olde stile of your compass and set it downe
upon the glasse of your compass, the north point
right with the north, & the south point south, then
according to the elevation of your countrey or place
that you be in, lift up the south side of the olde stile
even with your equinoctiall, & let the north point
lene upon the glasse, so shal the wyer point even to
the north pole, then looke what shadowe that the
wyer doth make that shalbe a true shadowe, either
by the moone or the sunne, so shal you see the
six houre of the day better then by any other way,
then when that the sunne or moone hath south
declination, then must you observe the shadowe un-
derneath the stile or carde, but it ware better to be
made in metall, the .32. wyndes or pointes, and then
you may in like maner put to the .24. divisions
small to know the houre of the day, and then you
may